ALONE IN THE WINTER WOODS.

A Railway Explorer's Adventures in the Wilds of Ontario.

Early in 1874 I was two hundred and fifty miles north of Lake Superior in charge of fifty-three men and twenty dog teams, engaged in exploring a path for the Canadian Pacific Railway. My line had been run to about twenty miles from its starting point when an order came that I should survey, to their northerly sources, if possible all lakes and streams touched on the route.

As this would be a difficult task, I left my transit-man in charge of the main trail, and went back with a small party to "traverse the waters we had passed.

I had been working on this for some time when our stock of provisions ran low. We were then some thirty miles north of the camp where my transit-man would probably be. A very difficult, broken country lay between us.

I held my men to work as long as I dared, heping to complete the traverse of the stream I was surveying; but one night, when the thermometer stood at twenty-five degrees below zero, it became clear that there was nothing for it but to start for the main line next morning in order to get food.

This might perhaps be found at some cache of provisions much nearer us than my transit-man's camp, for such caches were intended to be maintained about five miles apart on the main line for the use of dog-teams passing up or down.

When I called "Camp" that night, the men used their snow-shoes to shovel out a hole over which to place our tent. While some covered the remaining snow with birch bark and then with evergreen twigs for our bed, others laid in a stock of fire wood and a pile of birch bark with which to start the blaze. But when I ordered the lighting of the fire, we found there was but one match left in the party!

The men were afraid to take the responsibility of striking it. They insisted I should do so. A strong wind was blowing over and eddying through the woods. I took the match and bent down in lee of the snow thrown up from the camp.

That was a moment of intense anxiety. If the match failed, we should have to walk all night to keep ourselves from freezing.

I loosened my sash and my Hudson's Bay coat for an unfrozen surface to strike on, whilst the men stood by as if waiting for the execution. When the tiny flame blazed, they thrust bits of birch bark to it so eagerly that it was almost put out.

But one paper-like bit caught, and immediately the whole heap of birch bark was flaming, while we are all broke out into shouts of relief. Well might we, for it was not impossible that we should all have perished had we been unlucky with that match.

Early next morning I ordered the men to set out for the nearest cache on the main trail. It was between ten and fifteen miles from where we stood. If they found provision there, they were to return at once. Otherwise they were to push on for my transit-man's camp. I would wait for them till the following day at noon, and if they failed to return, would follow as best I might.

That day I was engaged in keeping up my fire and writing up my notes. Though the men had not returned at night I felt no anxiety. The food they had left would last three days. It was true that I had no matches, but the weather had moderated.

I meant to strike across country next morning for my transit-man's camp, and I did not suppose that I should be out alone and without fire for more than one night on the way.

As my men had not arrived next day at noon, I concluded that, finding no provisions nearer, they had gone on to camp as agreed. My pack was soon made of blanket and overcoat. I carried tomahawk, tea-can and drinking-cup in my sash. Then with my little satchel of note-books slung over my shoulder, I started straight for the point where I expected to find my party.

The course took me to a lake of which I knew something, and I diverged a little to have the advantage of travelling on the ice down a long bay and outlet stream of which I had heard from an Indian. The sun was obscured all day, and yet I was so perfectly sure I was right that I went along the ragged coast without once consulting my compass.

About four o'clock in the afternoon I was astonished to hear the sound of a waterfall. Pushing on, I soon saw the cloud of mist. Then I knew I was off my course. The secret was that there were two outlets, and I had mistaken the smaller for the larger, which begins five miles more to the north, and flows to the falls on a course almost at right angles to that which I had followed.

Musing on my situation that night before a blazing fire that threw its light far out among the tall birches and spruces, I thought I heard a noise of some one coming. It could not be my men; they could not be back so soon, and they would come from the opposite direction.

It could not be the wind; there was none now to stir the branches. Soon the sound ceased.

Just as I was crediting it to my imagination, I heard it nearer and almost behind me. It might be a stray Indian, who would keep me company for the night. But why should he not come boldly into the firelight? And why should he move from place to place beyond its rays?

Now I heard the sound to my left, and was peering in that direction when the snow was crunched more distinctly and I saw advancing two luminous balls which seemed as large as eggs, and of prismatic colors. Just then a log of the fire fell down, and a fine blaze rose. There stood, but a few yards away, a great moose!

He gazed for full five minutes, as if spellbound by the firelight. I had no fire-arms, and would not have shot at the grand creature in any case. At a slight movement of mine, he uttered something between a snort and a whistle, wheeled into the dark woods, and I saw him no more.

In my loneliness I felt the loss of even the animal's company.

Some distance above the falls both streams unite in a long, deep rapid. The island between this junction is lofty with precipitous banks. As I ought to have been on the north side, there was nothing for me to do but to cross the river, or go back to the lake and follow the northerly outlet, or else strike out from the lake and make a bee-line for camp.

There was no crossing below the falls, so far as I could see, for the banks were high and precipitous. To go back to the lake would be a dangerous loss of time. But it appeared not impossible to cross so narrow a stream at the brow of the falls.

There the spray and snow, advancing broadly from each side during the winter, had formed an irregular ice-bridge. In the centre it was narrowed to about six feet wide—simply a mass of frozen foam and spray.

I had no choice but to venture on this or retrace my steps. As either choice seemed about equally desperate, I resolved to cross at all hazards.

If the frail bridge should give way, no one would know my fate unless I left some trace on the bank. For that purpose I cut a large chip out of a birch, and wrote on the white wood:

"Feb. 22, 1874. I must cross this ice bridge over these falls. If it breaks you know my fate and my name"—which I appended.

Out on the bridge I went till I reached the narrow place, which was about six feet across. On its edge I loosened the pack and threw it to the wider bridge beyond. Then I flung my snow-shoes and satchel across. Next moment I would have given the world to have them back again!

But now the die was cast. I must go on or soon freeze. It was impossible for me to travel without snow-shoes. With a pole to steady me I advanced, with my heart in my mouth, to the narrow space of frozen foam. It seemed honeycombed, but hard.

The roar of the water just below me scared me, and the sight of the chasm below the falls made me giddy. I felt my feet crushing the foamy mass; but I dared not spring on the frail structure. My only hope was in going gently, and submitting it to no such shock as I should give it by a jump.

Then all was suddenly over—the perilous place was passed in a few seconds—I was safe!

Now it seemed almost childish to have left that message on the tree. I would have given a good deal to be able to blot it out; but cross again? No! Probably the penciling remains there unread to this day.

In adjusting my snow-shoe strings for the rest of my journey I missed my knife, but soon remembered that I had put it in my satchel after lunching. Turning out the contents of the satchel I found not only the knife, but two matches.

I fairly screamed with joy. Now I could rest instead of tramping all night around some tree to keep myself warm.

After a frugal supper I did rest well before a great fire of branches that I wrested from dead and living trees. To keep the fire smoldering till morning I hacked down a birch with my tomahawk, cut it into three long lengths and "niggered" these each into two by turning them on the coals. Then I put them all on the fire and lay down.

On awaking I found three inches of new snow on my blankets. But last night's embers still smoldered, and I soon blew them to a blaze. Again I breakfasted alone, and resumed my lonely way over fallen timber, hills and rocks.

About eleven o'clock that morning I came to what looked like a river about fifty yards wide. When I had nearly crossed it the ice became "glare." The water apparently had risen here over the first ice formed, had

then run along the bank till it swept away the snow, had then been re-covered with ice, and had finally receded, leaving a shell of ice. Here and there a snag protruded.

I did not think from appearances that there was deep water under the shell and near it, but as I advanced I kept poking cautiously with my pole. When I was not more than five yards from shore my right snow-shoe broke bodily through as if a great bubble or mere scale of ice had been just there.

I had time to throw my weight on the other foot, but there I was stuck. My right snow-shoe had turned, and was held under the ice. I tried every conceivable plan for extracting it, and all in vain.

I dare not try to kick my foot loose from the snow-shoe, for if I lost it in the current I could not travel further. I dared not lean back to loosen the strings, and so haul up the shoe, for thus I might lose my balance on the left foot and plump down through the hole. I was wholly mistaken, too, as to the depth of the river: by my pole the water was nearly seven feet deep!

If the ice under my left foot should give way I was done for. I dared not struggle lest it should break down.

At the end of a quarter of an hour I was worse off than ever, for my left leg was weakening with the strain. I was at my wit's end when a way out of my peril suggested itself.

There was a small snag near, but it was just beyond my reach. I could catch my tomahawk's head on the snag, but not firmly, and I dared not pull with so slight a hold for fear of losing it and falling backward.

It occured to me that I might chop away the ice around the snag, and then pull it near enough to clutch. In this I succeeded after many minutes' labor.

Now I could pull myself free, but dared not try lest I should lose my snow-shoe. The hold I had enabled me, however, to move my right foot, which I did in every conceivable way for perhaps ten minutes.

At last, when I had almost given up hope, a lucky turn brought the shoe up edgewise, and I carefully made my way ashore over the most treacherous of ice.

My right leg was wet nearly to the knee, but the weather was not now very cold. I made a fire with my last match, warmed myself well, and resumed my journey. Three hours of precious daylight had been lost, but I managed to reach the main dog-trail about sundown.

There I might have spent the moderate night, even without a fire, but my pluck was reinforced, and I resolved to try for camp that night. There was a good trail and a clear moon.

The line might have gone ahead about seven miles after I left it, I supposed. But it seemed I had been on it for twenty miles when the trail led me on and off a long, narrow lake. I was so tired that I felt that I could go little farther when I happened to see some patches in the snow. Stooping I found them to be bits of rabbits' fur, and I knew some Indian wigwam was probably near.

Soon I came across new snow-shoe tracks diverging from the trail. These I followed about fifty yards and found the wigwam banked up to the middle with snow and cedar bark. A friendly column of smoke rose up from the pointed roof into the clear moonlit air, and there I resolved to stay for the night.

I entered, with the everlasting "*boshoo*" as my salutation, and as the Indian etiquette demands, shook hands all around.

There were two big Indians making snow-shoes at one side, and two squaws with an old one and two papooses at the other. A bright fire blazed on the "caboose," with some flat stones around it on which pieces of rabbits' flesh and beaver tail were roasting.

After the first salute no one took the slightest notice of me. The men went on with their work, and the three squaws looked vacantly into the fire. I put off my pack and satchel, and sat for a while in solemn silence.

Then I took out two whole plugs of tobacco, handed one to each of the men, and gave my whole remaining stock of sugar and tea to one of the squaws, whom I supposed to be the "mistress of the house."

This called out all round a series of "mequitches"—thanks. Again there was long silence, after which the squaw to whom I had presented the groceries rose silently, and put some water into a tin can with some tea from one of the little bags I had given her. Then another long silence. When the water boiled, she handed me the can of tea and my little sugar bag, which, after sweetening my tea, I returned to her with the usual "mequitch."

She then pointed to the roast on the hot stones, and muttered, "Buckate"—You are hungry. I certainly was, but that mess was too much for me, although I appreciated her hospitality.

I excused myself on some plea or other, and ate instead the remainder of my cheese with some biscuit and tea, dividing the remaining biscuit between the two papooses.

MASHONALAND.

Evidences of an Ancient Race as its Former Possessors.

Mr. Rider Haggard is likely to be vindicated by the conquest of Matabeleland and the consequent development of the gold fields of that region and Mashonaland, undisturbed by Lobengula's raiders. When Mr. Haggard published "King Solomon's Mines" a great many readers thought that he had liberally overdrawn his imagination for his account of the stately ruins and abandoned gold workings where the action of the romance passed. Now that Mashonaland is being developed, it is found that not only are the ruins there, but the gold. The gold reefs extend far up into Matabeleland, and along their extent are evidences that in far-off times they were worked by a civilized, powerful race, who built temples and fortresses quite beyond the constructive capacity that any negrold people has yet manifested.

At Zimbawbe, in Mashonaland, the stately front of a fortress temple rears itself from the jungle. The structure was evidently constructed by trained engineers, who worked on a plan preserving mathematical unity throughout. Near by are the gold mines, and explorers have found some o the ingot moulds used by those who toiled there thousands of years ago. As the hawk, the symbol of the goddess Hathor, who presided over mines, is found in the ruins in Mashonaland as well as in the Egyptian quarries, the theory of the antiquarians is that there was an Arab-Semitic race once in control of what is now the latest addition to England's possessions in Africa. This race, they hold, may have been subjects of the Queen of Sheba. Whoever they were, they were evidently powerful and highly civilized, and held their ground by their military strength as well as by their ingenuity.

Paper can be Made out of Anything.

Paper can be made out of almost anything that can be pounded to pulp. Over fifty kinds of bark are employed, while old sacking or bagging makes a good article. Paper is made out of banana skins, from been stalks, pea vines, cocoanut fiber, clover and timothy hay, straw, fresh water weeds, sea weeds, and more than 100 different kinds of grass. Paper has been made from hair, fur and wool, from asbestos, which furnishes an article indestructable by fire; from hop plants, from husks of any and every kind of grain. Leaves make a good strong paper, while the husks and stems of Indian corn have also been tried and almost every kind of moss can be made into paper. There are patents for making paper from sawdust and shavings, from thistles and thistle-down, from tobacco stalks and tanbark. It is said that there are over 2,000 patents in this county covering the manufacture of paper. No matter what the substance, the process is substantially the same. The material is ground to a pulp, then spread thinly over a frame and allowed to dry, the subsequent treatment depending on the kind of paper to be made.

A vein of mineral wax which resembles pure butter has been discovered by peat diggers in Ireland.

THE FARM.

Good Winter Layers.

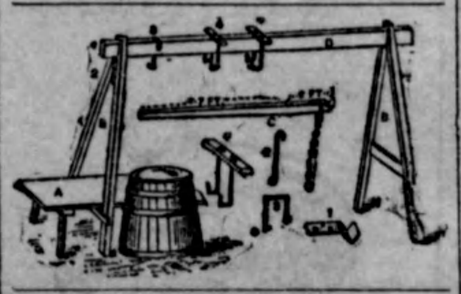
The most difficult thing to do is to provide proper quarters for the laying hen in the winter time, although some have an idea that this is a simple matter. But the fact is, if the hens are given comfortable quarters in the cold season they will lay almost as many eggs as in the summer, and so very few do this that it is trite to remark that there is a failing somewhere. Given the same food and proper protection in the winter, there is no reason why the egg production should not be as great. The trouble is now that so much of the food digested is required to make animal heat to resist the cold that there is little left for egg making. Some poultry raisers attempt to make up for this by giving the hens more good food, but this does not alone reach the trouble. The winter quarters must be attended to.

Now the hens must be made comfortable twenty hours in each day, and quarters that will be comfortable for the Plymouth Rocks may be very uncomfortable for the smaller and less heavily feathered Leghorns. The two cannot be placed in the same poultry house in the winter and both be expected to do the best in egg producing. As a rule, however, the climate of the average poultry house is not warm enough for either breed. We need a complete readjustment of matters, and the construction of such sanitary houses that the poultry will be made entirely comfortable. It would be well even if we could supply artificial heat and good ventilation in the roof. Then the heat could be regulated to suit the demands of the poultry.

But as this seems to be nearly out of the question it is well to consider the best methods that we can now adopt. The floors and sides of the building must be perfectly tight so that no air can circulate through them. Even the trap door through which the birds enter should close so tightly that no draft can come through. If windows are supplied they should be double ones, and all of the wall should be lined with tarred paper and double wooden sidings. The house should not be a high one, only as high as a man's head, for if the house is high there will be cold layer of bottom air that will chill the birds. Most of the roosting places should be placed high, for they are always warm compared with the lower ones. They are free from dampness also. Very little ventilation is needed over night in such a place. The ventilation should be placed as high as possible above the roof, and it is better to have a wooden chimney running up several feet, as this will be less liable to cause cold winds. The ventilator should be so arranged that it can be tightly shut or opened so as to give plenty of air. On very cold nights it should be opened only a very little so that the foul air can escape, and on comparatively mild nights it should be opened wider. Early in the morning the house should be thrown all open and thoroughly aired, and just before the birds go to roost at night a good lot of fresh air should be allowed to circulate through the place. The heavy feathered breeds of fowl can stand more ventilation and cold than the other breeds, but a poultry house properly constructed will do for either. It can be regulated to suit any birds, for all ventilators and entrances are under the control of the owner.

Butchering Outfit.

Farmers who butcher their own hogs in the fall, all know the old way of butchering is very inconvenient and tiresome. The following illustrated arrangment makes the labor comparative easy. The top piece is



2x5 inches, and 12 ft. long. The mortises for B B to fit in, are made 5 inches from the ends of piece, and are ½ inch deep, 2½ inches wide at bottom, by 1¾ inches at top, thus only one bolt is needed to hold them together at top. The upright pieces B B are 2x5½ and 7 ft. long; crosspiece, 1¼x2½ and at one end this should be bolted on upright pieces, down low enough so that the bench will set over it. The lever is 3½x2 at staple, and shaved down to 1¾ at end. Staples made of 5-16 inch rod iron, and long enough to clinch. Clevis where chain is fastened is made of ⅜ inch iron. Fig. 1 is iron, 6x2x¼ bent, as shown for gambrel stick to rest on, while lifting hog to Fig. 4, which is made large enough to slip back and forth easily on upper piece. Rods ½ inch, bent to hold gambrel stick, Fig. 2 is ⅜x13 inches long, on which lever rests while lifting to Fig. 4. Fig. 3, ½ inch iron on which lever rests in scalding. Bench, 19x1½ inches, 20 inches high, 8 ft. long. Barrel to set in the ground ¼ its length.

Too Many Small Potatoes.

In far too many potato crops the proportion of marketable tubers are very small. This may result from such a drought as widely prevailed last summer, but quite often it is caused by putting too much seed in the hill. Planting whole potatoes of some varieties will surely bring a crop nearly all too small to be marketable. There are other kinds which have fewer eyes, and if a whole potato be planted not more than two or three eyes will grow, the others having their substance taken from them to make larger growth of those that took the lead. Cutting the potato in two pieces or even three and then putting two pieces in the hill is another cause of small potatoes. If the grower is entirely sure he has a strong eye with a piece of potato attached it will make a vigorous start, and in most cases produce more marketable potatoes than will a larger amount of seed.

Diseases of Fowls.

Hens are subject to several diseases, but mostly to those of the throat and the intestines. The first class is due to exposure to cold and damp, or to contagion. The latter is the result of bad feeding and indigestion. The most prevalent of the first class of diseases is one known as croup, which is very similar to the human diphtheria, and like that exceedingly contagious. It appears a thick adherent mucus or cheesy matter in the throat or mouth, stopping the breathing and making the swallowing difficult. The head swells and of course the birds stop eating. The remedy for this disease is to wash the mouth clean with warm vinegar and drop a pinch of powdered chlorate of potash in the throat. The food should be soft, and a little hypo-sulphite of soda should be dissolved in the drinking water. Excessive warmth is not desirable for fowls in the winter, only such as will keep a temperature at night of not less than 50 degrees. Another frequent disease is that of the liver by which the nerves of the lower limbs are so affected that the birds cannot walk. This disease resembles that of pigs by which the hind legs become useless, and are dragged about as the animal moves. Overfeeding is the common cause of this disorder, and the remedy is to stop the cause, giving no food for two or three days, but only water, and then beginning with small feeds, gradually increased.

Tapping Maple Trees.

Maple trees should be tapped with a small auger or bit to fit the metal spouts now used. The barbarous and injurious use of the axe to cut a gash in the trees is to be wholly condemned, as is also the use of the old-fashioned sap troughs, hewed out of small pine logs. The present method is to use the tapping bit, and the metal spouts on which is a hook to hang a tin pail, rounded hollow to fit the tree on the back, and covered to keep out trash and dirt. The finest quality of sugar or syrup may then be made by using one of the evaporators instead of the old-fashioned iron kettle. The sand that settles at the bottom of the syrup is the mineral part of the sap, which, if the sap had become wood, would be the ashes of the wood. It is mostly lime, potash, and silica, the ash of the maple having 60 per cent. of lime, 5 per cent of silica, and 12 per cent. of potash in it, and as the wood is made up of the solid part of the sap. it is, of course, of the same composition. And thus the residue of the sap boiling must be the same as the ash of the wood.

Good Corned Beef.

To have good corned beef in the summer it is necessary to use some precautions. The following method is used by the best packers. The meat is first steeped for two or three days in a weak brine to remove all the blood and liquid serum. The barrel is then well soaked with boiling hot water two or three times, the meat is packed in the barrel, and is covered with brine made in this way: For each 100 lbs. of meat take 9 lbs. of salt, 2 lbs. of sugar, 2 ounces of saltpetre and six gallons of clean rain water. Boil the water and dissolve these in it, let the brine cool and skim it, and then bring it to a boil again, then skim it once more, and pour it on the meat. To keep the meat in the summer the brine must be drawn off and boiled and strained and skimmed, and while boiling hot turned on to the meat. It is this heat of the brine that kills the germs that would otherwise cause the meat to spoil.

Practical Pointers.

With every animal raised on the farm whether for milk, meat or for breeding again in turn, early maturity is one of the conditions that have a direct bearing on the profit. Work toward this all the time.

The profit in an animal fed for market does not always lie in its heavy weight, but rather in what it has cost to secure that weight. Other things being equal, the animal that is fed up to a good full standard is the most profitable.

Unless you feed so well that your stock makes a constant gain, you are losing your feed at least and probably something more. Keep your eye open all the time to note any possible loss of appetite, as that will quickly be followed by a loss of flesh.

Uniformity of feeding is required in order to keep the cows up to a uniform production Every time that they fall back a little, it will require twice the ordinary feeding and care to bring them back to the former standard. Keep them from shrinking by the closest possible attention to their every need.

It is a bad habit to get to thinking that you can buy this product or that, which you need for use in your own family, as cheaply as you can grow it. Produce everything possible that is needed for home use, and so save the middle-man's profit on both that which you would have to sell and that which you would have to buy. For if you do buy, you must grow some other thing with which to pay the bill, and someone beside yourself makes the profit on both transactions.

The growing of early lambs is a nice business when one is properly fitted up for it. It requires good, warm housing and a knowledge of some of the finer phases of feeding. The two items to aim at are, earliness and good weight, giving a variety of food and taking care not to undo your work by overfeeding. As soon as the lambs are in marketable condition, rush them off without further delay, as a few days will often make such a change in the price as to reduce the profit to a loss.

If you can raise one or two good colts each season, you may add materially to the profits of the stock department of your farm. But it will hardly pay to do it unless you have some good mares to start with. Poor mares bring poor colts, and these are not in any great demand. Be sure that the mares you breed are sound in body and limb, of a kind disposition, yet spirited and plucky. Then if you have used a good stallion you will be very apt to secure a colt that can be readily marketed at a price that will warrant all the care that you can bestow.

Too Remote to Offend.

He—"They say that the light from that star takes 250 years to reach the earth."

She—"Oh, in that case, I guess there is no need for me to get offended at its winking at me the way it does."

Rather Overdoing It.

"I believe in trying to put as good a face as possible on everything in times like these Maria," said Mr. Billus, looking again at the bill that had just been brought in, "but it does seem to me that $3.75 for complexion wash in one month is putting it on a little too thick."