

TUMBO ISLAND COAL MEASURES

Messrs. Hepburn Will Sink Shaft on Property and Exploit New and Apparently Illimitable Areas

Picture an island two and a half miles long and a mile in width, on one side of which runs a practically land-locked harbor capable of providing anchorage for the largest ocean going ships. Picture this island blessed by a beneficent climate, as an illustration of which it may be stated that the precipitation during the last two months has been 0.0. And further picture this island as being densely wooded, with arbutus trees five feet in diameter, with cedar, hemlock, Douglas fir, with timber of other varieties as numerous as can be found over the length and breadth of Vancouver Island itself. Around this favored spot fishing of every character can be obtained. Such are advantages possessed by Tumbo Island, situated in the Straits of Georgia, but the aggregate of all these are nothing compared with its subterranean wealth, a factor which will probably write its name large in the history of the development of British Columbia.

For, as already noted, coal, in practically illimitable quantities, has been struck on Tumbo Island. After twenty years of fruitless search, the efforts of prospectors have been rewarded. In the face of pessimistic and oft repeated warnings, two brothers have sunk some \$80,000 in the enterprise. When they commenced they were offered \$1,000,000 if they struck coal. Today it is questionable, totally undeveloped as they are, if they would take \$5,000,000 for the measures which have now been proved.

One of these brothers, Mr. H. McI. Hepburn, arrived in Victoria yesterday, since October last he has been superintending the diamond drilling operations on Tumbo Island and has come to meet the head contractor of the Diamond Drill Contracting Company, of Spokane, to arrange for the work to be continued until the number of the ledges in the area are definitely ascertained. At 874 feet a seam eight feet in thickness was struck. All the way down the degree of the pitch is the same. The coal is of the soft variety, the same as that at the Nanaimo mines, and it seems certain that the ledge which has been struck runs under water over a distance of seventy-five miles, finally becoming a part of the Nanaimo coal measures. How far it runs in the other direction is unknown.

To Explore Thoroughly. As the drilling plant is on the ground this work will be continued until the exact extent of the measures are discovered. Mr. Hepburn states that he and his brother, Mr. A. J. Hepburn, of Vancouver, intend working the areas themselves, and it is quite probable that within three months they will be putting down a working shaft. They expect to find two further ledges before the drilling operations are completed. Tumbo Island is situated 40 miles from Victoria and 50 from Nanaimo, and lies directly on the main ship waterway. It will thus be an ideal point for vessels to fill their bunkers. Its harbor is capable of providing anchorage for the largest ocean liners, the water almost flush with the shore line being sixteen fathoms in depth. On the shores of this harbor it is proposed to establish coal bunkers. Tumbo Island possesses the advantage that everything can be unloaded from the mine by gravity.

When the drilling operations on Tumbo Island are complete, drilling will be continued on Saturna Island and probably continued to Mima Island, as there are indications of submarine areas on every side. The Tumbo Island measures promise to develop into one of the largest mining areas in British Columbia, and they are ideally situated, lying as they do nearly midway between the two largest cities in the province, and directly on the route of transportation. Mr. H. McI. Hepburn has had eighteen years mining experience in Mexico, the United States and British Columbia. For the past six years he has been on this coast, and since October last has been superintending the drilling operations on Tumbo Island, the rights of which he and his brother control.

MONEY FOR C. N. R.

President Mackenzie Said to Be Coming Home With Forty-Five Million Dollars.

MONTREAL, May 27.—According to news received at the Canadian Northern offices, Wm. Mackenzie, president of the system, was one of the passengers who sailed from Bristol on the company's new steamer Royal George. Wm. Mackenzie is stated to be bringing with him drafts representing forty-five million dollars of British capital which he has secured for investment in Canadian Northern enterprises. Among these enterprises is said to be that of linking up the eastern and western portions of the Canadian Northern Railway system by means of a line through the country north of Lake Superior and completion of the company's lines between Montreal and Toronto.

TORONTO, May 27.—There is nothing in the story that we have received an offer of \$50,000,000 for the common stock and control of the Canadian Northern Railway. I have no knowledge of any such offer having been made, but even if it had been, we would not consider it or any other offer for control of the Canadian Northern system.

This statement dealing with the story emanating from Montreal to the effect that an offer of \$50,000,000 had been made by British capitalists for the stock of the Canadian Northern railway was made by D. D. Mann, vice-president of the railway, today.

OTTAWA, May 27.—A fire in Joseph DesRivieres' saw and planing mill made a spectacular sight in lower town shortly after midnight, and kept the fire department busy until about 2 a.m. The fire spread through the block among the numerous small wooden dwellings, and three were consumed. The rear of dwellings on King Edward avenue, Cumberland street and St. Patrick street, which overlooked the mill, were damaged by the fire. The loss is estimated at \$20,000.

RURAL AND SUBURBAN

SUCCESS WITH BROODER CHICKS

During the past winter I built a hover and one brood coop. The coop resembles several of the colony coops now on the market. It is a pulley style in the centre of the front of the coop, in which there are two window pulleys hung with 12-lb. window weights, to conveniently operate the two roof doors. It is a great advantage and no reason why it should not be attached to any coop where the roof is in the form of a door to be raised or lowered.

Size of the coop is 3x6 feet by 13 inches high in the back and three feet high in front. It has a movable partition in the centre to be used only when the chicks are very young or in cold weather. The front is composed of two doors, with a sash door inside the wire frame, the main doors are hinged on the side, the inside door or sash is hung from the top and swings out, operated by the use of a transom lifter that holds the sash at any angle desired.

Both ends of the coop are built alike with an entrance door in each. A wire netting yard (one inch mesh) 3x6 feet and 13 inches high, the top made in two doors, is used as an exercising place and can be used at either end of the coop. This is very important for when the ground gets foul the yard should be changed and the ground of the old yard sown to grain. This will not only purify the ground but also grow green feed for the chicks at the same time.

Under the roof doors are a pair of frames covered with waterproof cloth to be closed when the weather is stormy or used as a sunshade in summer. It furnishes lots of light in the coop, which is very necessary under our system. The opening under the roof is also fitted with moveable wire netting screens to be used when the weather is pleasant, then it is not necessary to close the canvas door or board door except at night. The outside or roof door is covered with a heavy roofing paper, making the coop water tight. This is general in the kind of coop we are using, the real difference from any other being, it is more convenient to operate.

The hover is 20x20 inches square, has four adjustable legs which makes it convenient to operate at 4 inches, 5 inches and 6 inches from the floor, according to the age of the chick. We have control of the heat at all times and run it from 100 to 70 degrees. The heat in the coop is so affected by the heat from the hover as to make the coop 10 degrees warmer than the outside temperature.

The coldest we have had, was down to freezing for several nights. It is very necessary to prevent chicks from crowding and the only way it can be done is to supply a warm hover. This will cause the chicks to spread out around the edges, and so far we have had no crowding among our chickens.

March 3rd we placed fifty day-old chicks under the hover. The floor under the hover was first covered with dry earth, as we did not have sand, then a coating of fine cut alfalfa. The floor of the balance of the coop was covered with the same material, but under this was buried a quantity of dry chick feed. A little gravel and a drinking fountain completed the outfit.

It was our object to teach the little chicks that when they were hungry they must scratch. In this we were successful, for in two days the little fellows were making their feet fly like old hens. Each night we would bury a fresh supply of feed after the chicks were under the hover, so that they did not look to us for feed or cry, but just scratch. We also buried ground meat at the rate of about one-half ounce to the fifty chicks on the basis of one ounce to six pounds of chickens, an ounce being a table-spoonful.

We followed this plan for the first week, but after having them all broken in and trained to scratch instead of cry when hungry, our curiosity got the better of us and we began to hand feed the meat, it furnished us so much sport to see them run.

This hand feeding method did not injure the chickens, but taught them bad habits, that is of crying when they heard us coming, instead of scratching. Still, in a way, our object, which was to prevent the necessity of feeding four or five times a day, as is usually the custom was accomplished. At first several times a day we would stir the litter to show the little fellows that the grain was there and so far these chicks haven't done a thing but eat and grow.

At one day old the chicks averaged three-quarters of an ounce each, at one week old, two ounces, at three weeks five and a half ounces, at four weeks eight ounces and still growing.

During the first week they were fed about ten and one-half pounds of chick feed and about seven ounces of meat. During the second week about fourteen pounds of chick feed, four pounds of scraps from the house and ground meat combined, while during the third week about eighteen pounds of chick feed and four pounds of house scraps and ground meat and the fourth week about twenty-eight pounds of chick feed and twelve pounds of house scraps and ground meat.

From the start they were furnished fine cut grass and clover. All house scraps were ground and mixed with the ground meat, which was cooked, if liver, and fed raw when other lean meat. All was thoroughly mixed with about two-thirds brain moistened slightly and fed twice a day at 10 a.m. and 4 p.m.

After the third day the chicks occupied the wire yard, giving them a floor space of 3x9 feet and up to the present time they seem perfectly comfortable, as far as room is concerned. We have renewed the litter in the

coop twice and moved the yard once during the four weeks.

The coop is well ventilated night and day. After the chicks go to the hover at night we rake the yard over thoroughly, sprinkle green cut clover over this, fill the water fountains, which are in yard and coop, and cover up chick feed in the litter inside the coop, and the next morning, long before we are up, the chicks have their first course of grain and are then let out into the yard for the day. After the second week we gave some whole wheat with the chick feed. At ten days of age we raised on the hover to five inches from the floor and at four weeks to six inches, and use only dry dirt on the floor. So far have not run the temperature lower than 60 degrees at night and the result of our experiment is as above stated.

Raising Broilers

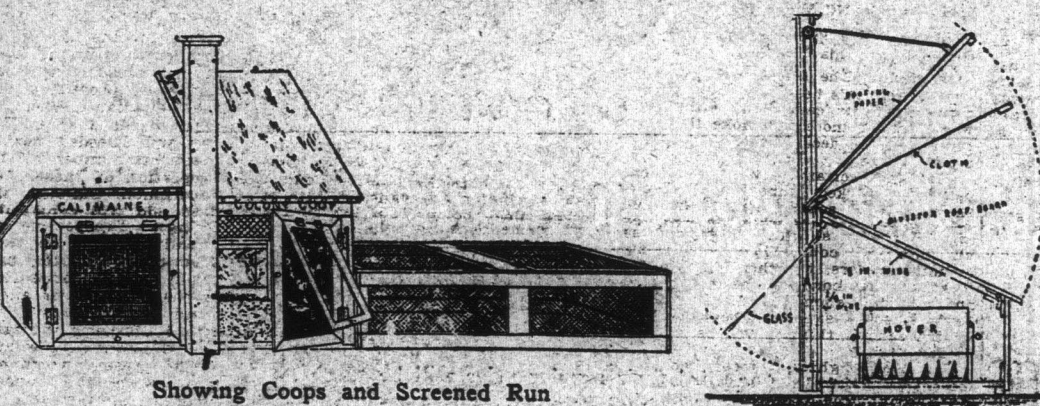
A well-known and reputable poultry plant has persistently maintained that they market their surplus cockerels as broilers when they are six weeks old, at which time they weigh three and a half pounds the pair. Believing that they really do accomplish this feat, we asked the secret and were frankly told.

They feed the baby chicks a mixture of cracked corn and cracked wheat for three days. Then they place before them a good dry mash, and also feed cracked corn, cracked wheat and hulled oats in deep litter. When about four weeks old they add to the feed already mentioned a wet mash once a day. This is made of a good, well-balanced dry mash, about half corn meal, mixed with molasses.

We believe that this system will produce plump, marketable broilers at six or eight weeks. Of course the grit, oyster shell and clean fresh water must be kept before them.—M. A. Darrt, Windsor Co., Vt., in Successful Farming.

RAISING LAYERS

Do not blame your pullets next winter when they are not laying; you should have been busy on the problem during the last winter.



Showing Coops and Screened Run

ter. You should know which hens are furnishing the eggs from which these pullets will be hatched; the chances on the average farm are that the eggs from the poorer layers and slower maturing pullets are being used for this purpose, and that the hens that have been laying all winter are being used to hatch these eggs. Culling, selection, elimination, kept constantly in mind, and continually practiced, will mean healthier fowls, livable chicks, earlier pullets, and eggs when they are most wanted. Cull out the extra males and the weaklings; select the quick maturing, early laying pullets and the hens that laid well during their first laying year, and make up a breeding pen for producing eggs for hatching. With them have a male or males whose dam was a vigorous, prolific hen. Do not set eggs from the whole flock, but dispose of all males not used in this breeding pen, and from the remainder of the flock gradually eliminate the drones. It is surprising how large a proportion of the average flock is useless, or worse than useless; for these non-producers are in the way of the workers and are preventing them from doing their best. If you cannot make up such a breeding pen this spring, try this for next season. Next fall mark or band the first thirty pullets to begin laying; also the yearling hens that are doing well this season. During the early winter carefully note their performance, and from these banded hens and pullets make up your next year's breeding pen. You will be surprised at the increased vigor and productivity of your flock. If your hens are not responding to good treatment with a good average egg yield, try increasing that average by cutting out the non-producers. A well bred, well housed, well fed, and well cared for hen will lay 60 eggs during the three spring months, enough to pay her board for the entire year. There is money in hens; get it out.—W. E. Valpon, Colorado Agricultural College, Fort Collins.

EGGS FOR HATCHING

It is a well known fact that eggs for hatching sent by post or rail frequently give poor results. The fault lies sometimes with the eggs, but still more frequently with the system of packing adopted. The aim should be to avoid not only broken shells, but also to prevent injury to the delicate membrane enclosing the yolk, as an egg may be completely spoiled for hatching without a trace of fracture appearing on the shell. This can be prevented by using a package of moderate size and weight.

Of the many patent egg boxes some of the best are too expensive, others are too small, and a still greater number too fragile. The popular cardboard boxes are objectionable. They undoubtedly save labor in packing, and

are light in weight, but their initial cost, the number of breakages that occur whenever they are used, make of these boxes an expensive item for the small poultry keeper.

After trial of many different kinds of package, nothing had been found to compare with a plain wooden box 11x7x3 1/4 inches (outside measurements) made of the very lightest boards.

To pack a dozen eggs, a layer of hay is placed at the bottom of the box. Each egg is first placed in a piece of newspaper and then in a strip of soft hay, after which it is placed on end in the box. A box of the dimensions given holds twelve eggs in four rows of three eggs each. It is most important that the eggs should stand on end, and that they should be so tightly packed that they cannot move when the box is roughly handled or shaken. The proper amount of hay to use is easily determined with a little practice. The lid should be tied on, never nailed, and no label is necessary, as the address can be written with indelible pencil on the white wood. The danger of having valuable, high-priced eggs broken or interfered with when sent in a box that is tied only, and not nailed, can be overcome by screwing down the lid.

In order to get best results, all eggs for hatching that have been sent a journey should be unpacked and allowed to rest on their sides for twenty hours before they are placed under the hen.

CHICKEN FATTENING

On the Continent of Europe fattening has become quite a fine art, and in England now case. Fattening is a maturing by means of much more is being done than used to be the which the bird's flesh becomes mores tender. There are two ways of fattening—one, by the forcing process where chicken-rearing is carried on in a very large way; and the other, the ordinary way of giving certain selected foods without confinement. There are plenty of scientific fattening foods on the market, or perhaps the best of all is, a mixture of oatmeal

that task, like the care of poultry, must necessarily devolve upon the farm woman.

To a great many people a garden means only a place for the growing of vegetables—a place where intermittent rows of onions and cabbages battle for precedence with crops of weeds, the battle going inevitably to the strong. Such a garden is as transitory and unsatisfactory as the annual flowers which cannot be planted until so late that their earliest blooms are but heralds of the frosts that are so soon to destroy them.

But your real garden is a hardy perennial—a permanent institution, not to be carelessly located or lightly transferred. It contains so many delightful things which live through the coldest winter and reappear with renewed vigor in the spring, that the vegetables which are sown each summer, though quite indispensable, are nevertheless little more than an incident in the complete cycle of the garden's existence.

To such a garden as this the busiest farm woman may well devote a portion of her closely filled time.

There is of course a great deal of labor in connection with the making of a good garden that a woman cannot do, such as hauling of fertilizer, spading or plowing the ground, setting out of small fruits, etc., but she is a simple woman indeed who cannot induce her men folks to do these things for her.

A garden should properly contain only small fruits and summer vegetables, with such herbs or flowers as the taste of the owner may dictate, all vegetables intended for winter use to be relegated to the fields where they can be cultivated by horse power. Such an arrangement renders the garden small enough so that the labor involved in its care is not prohibitive.

The formula which spells success with a garden, calls for about equal parts of enthusiasm and labor, and both of these ingredients, the average farm woman should be willing and able to give.

The spot selected for the garden should, for obvious reasons, be near the house. It should be protected from marauding hens either by being fenced in or by having the hens fenced in. The soil must be made as fine and mellow as possible, and it must be heavily fertilized. It is as useless as it is unreasonable to expect good results from poor soil. A plant can no more thrive and become fruitful in a soil which is lacking in the elements of plant food, than a child could grow to perfect maturity on poor or insufficient food.

The ideal garden must contain, in addition to the summer vegetables, rows of raspberries, gooseberries, currants and strawberries, as well as a bed of asparagus and a dozen hills of rhubarb; and to be really perfect, it should have its corners spaded up and planted to herbs and sturdy-growing flowers.

A garden such as this ministers richly not only to the material but also to the aesthetic needs of its owners. It yields crisp salads and sweet cool fruits for the table and enhances them by bowls of bloom and sweet odors of thyme and fennel. In the spring, almost before the first bluebird has come, it stirs into life, showing delicate green with its chives and asparagus, and delicate maple-red where the rhubarb is poking its fingers through the dull earth. In summer it yields uncountable good things, and even in winter its brown stalks wave friendly hands to use across the snow, and whisper softly of sunnier days to come.—H. M. W., in the Maritime Farmer.

SALT FOR DAIRY COWS

Several years ago the Wisconsin Experiment Station carried on some extensive experiments to determine the value of salt for milk cows and also the amount of salt that should be given. We do not have space to go into details of how this experiment was carried on, but we quote the summary of their findings along this line:

In every case the cows exhibited an abnormal appetite for salt, after having been deprived of it two or three weeks, but in no case did the health of the animal, as shown by the general appearance, the live weight, or the yield of milk appear to be affected, until a much longer time had elapsed. This period of immunity varied with individual cows from less than one month to more than one year.

In every case there was finally reached a condition of low vitality in which a sudden and complete breakdown occurred, from which recovery was rapid if salt was supplied. This stage was marked by loss of appetite, a generally haggard appearance, lustreless eyes, a rough coat, and a very rapid decline in both live weight and yield of milk.

The breakdown was most likely to occur at calving or immediately after, when the system was weakened and the flow of milk large. In general, the cows giving the largest amount of milk were the first to show signs of distress. They all suffered less in pasture than when confined to the stable.

The behavior of the cows in these trials indicates that their food contained sufficient chlorine to maintain them in good health, while dry, for an indefinite period and it seems probable that, under conditions existing in Wisconsin, a dry cow or steer would suffer no great inconvenience if given no salt, except that contained in the normal ration. It is calculated that the ration given in these experiments contained chlorine equivalent to about 75 of an ounce of salt per day, and it is assumed that this is the minimum amount of salt required per 1,000 pounds, live weight, to sustain an animal that is not producing milk. If this amount is not present in the food, it should be supplied directly.

In addition to this a cow should receive enough salt to compensate for the chlorine

contained in the milk produced. In general, this will require about .6 of an ounce of salt for each 20 pounds of milk given. A slight excess will do no harm, and it is recommended that dairy cows in Wisconsin be given at least one ounce of salt per day. Exceptionally heavy milkers will require more than this.

The uniform results obtained with all cows employed in these trials indicate beyond question that in Wisconsin, and in other regions similarly located, salt, in addition to that obtained in the food, is absolutely essential to the continued health of a dairy cow, while producing milk.

It is evident, moreover, that the amount of salt which must be supplied directly, will vary greatly in different localities, it being more at high elevations and at places remote from the sea.

The success of these experiments must be chiefly attributed to the exceptionally long periods during which salt was withheld. In no previous tests, so far as the writer knows, have cows been deprived of salt for more than thirty consecutive days, which period is shown to be entirely inadequate, under conditions which exist at this station. The twenty-three cows that were deprived of salt in our trials all continued for more than sixty days and several of them for more than six months before any noticeable affect upon their physical condition or yield of milk occurred.

CHAT ABOUT BUTTER

"Just take enough space in your 'gossip column' to tell the butter makers that the time has come for them to reduce the amount of coloring matter that they are using in their butter," remarked a prominent operator. "The season this year is so early that the cows are already betting a bite of grass, and this gives more color to the butter. Several lots in the past week were highly colored, and unless the matter is given attention at once we shall have so much of this over-colored stock on our hands that we shall not know what to do with it. Emphasize the fact that the best trade wants light colored butter. I don't mean by that chalk-white, though a few customers like such—but a delicate, light straw shade that has life in it. Such lots suit almost anyone. Now and then a buyer has trade for goods with more color, but this is the exception. You cannot make these points too strong, and now is the time for the butter makers to get busy."

"Accidents happen in the best regulated families," is a familiar expression that is full of meaning; and some strange things occasionally happen in some of the best families. Some two weeks ago I was asked to look at a shipment of butter that arrived that day from western creamery—one of the best that comes to this market. The color was simply dreadful. Talk about barber poles, why they aren't in it with the appearance of that butter. We bored tub after tub and the trier showed a layer of very light color and then a layer or roll of almost red butter—enough coloring in it to taste very badly. What would otherwise have been a fine product was ruined for table use, and the whole shipment sold as packing stock at a loss of 10c a pound. Several experts studied over the problem, and the conclusion was that the butter maker forget to put the coloring in the cream before churning, and he discovered his mistake after the butter came. Effort was then made to color the butter, but it did not mix in satisfactorily and the entire churning, which was a good sized one, was very seriously damaged.

I am inclined to think that there are a lot of new butter makers in the creameries this spring, and some of them are not up to the best methods of packing their butter. Some of the defects that result from neglect or lack of knowledge are not serious, but they contribute to the appearance of the stock, and if the price is not affected a sale may be interfered with. One of the things that need attention is the proper lining of the tubs with parchment. Not infrequently I see a lot where the paper has been folded over so much on the bottom that no paper shows on the sides. No one would know that the tub was lined unless the butter was turned out. Others put the linen cup cloth on top before folding over the paper, and it a lot does not sell readily and has to be shown several times the edges of the paper become torn and the appearance is unfavorable. This latter complaint is so frequent that I want to call special attention to it. After the tub is well filled the paper lining should be folded over the butter about two inches, and then the linen cap cloth put on. This permits drawing back the cloth so that the butter can be bored without disturbing the paper. Keep constantly in mind the fact that a handsome appearance counts a great deal in almost any market.—N. Y. Produce Review.

AFTER DINNER

With magazine and friendly pipe
I sit at ease
And read about some wondrous type
Of early pease.

A man can plant them in his yard
And make them pay;
To cultivate them isn't hard,
The writers say.

I read about the Belgian hares,
The Plymouth Rocks;
They pay as well, the ad declares,
As mining stocks.

And thus a pleasant hour I pass;
I smoke and nod,
And dream of how I may amass
A goodly wad.