

COVERLAND

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MAGAZINE

February, 1919

Hon. J. M. Longyear, Feb. 19



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CLOVERLAND

MAGAZINE

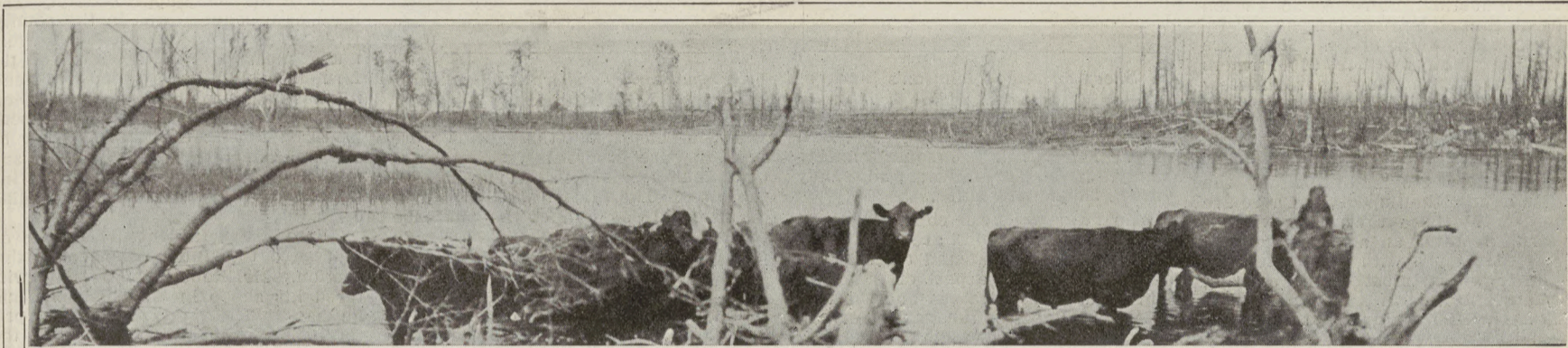
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Greater Cloverland—a Garden of Opportunity



A GREAT and new industry is being developed in the great north-west—an industry which, in 1918, passed from an experiment to a certainty.

This new industry is entitled to a vigorous welcome from the present great industries of Northern Michigan, Wisconsin and Minnesota, in that it will become a pillar of them all and compete with none. Its value in dollars is staggering, and yet it is a reality, an accomplished fact, and the time and extent of its full realization what we ourselves make it.

Here is the proof:

In October, 1917, Frank J. Hagenbarth of Utah, president of the National Wool Growers' association and a national live stock expert and authority, after a thorough inspection of the cut over lands of northern Wisconsin and Michigan, publicly said: "You are losing an annual return of one hundred million dollars. I sincerely believe these figures can be doubled. This sounds big and it is big. You have the greatest livestock and dairy country in the United States, if not in the world."

The basis of this startling statement is founded on absolute and undenied fact. Western grazers must find new and favorable locations at once or go out of business. Droughts, lack of grazing facilities, the operation of the Kincaid law, the taking up of available water holes by homesteaders, all have combined to force a change. No one, least of all the grazer, stops to argue these facts. They are absolutely true.

The upper peninsula of Michigan, the 15 counties we have so accurately called Cloverland, took Hagenbarth's statement, worked it into a business proposition and made a profit on it in 1918 of three and a half million dollars.

Our development bureau, financed by our county boards, our land owners, manufacturers and bankers secured an expert to go over our cut-over lands, blocking them in tracts of from one to twenty thousand acres with the generous co-operation of the owners. Secure in our knowledge of the value of these lands for grazing purposes, we went west with a total blocking of 250,000 acres and offered them for free trial to western grazers.

This offer was personally carried from ranch to ranch in the west last winter by Charles R. Hutcheson, extension specialist of the bureau and

By ROGER M. ANDREWS

editor of Cloverland Magazine. Himself a graduate of an Iowa live stock farm and of Ames college, his invitation to make us prove our good faith and the value of our lands had a force which brought results. He had nothing to sell, was in no way interested in the sale or lease of lands, received no fee or commission from any parties to the plan, and was backed by the personal acquaintance in the west of President Leo C. Harmon of the bureau, a former Montana cattleman and banker, whose father was the organizer of the Montana Livestock association forty years ago.

As a result of this personal missionary work, backed by the genuine value of the northern cut-over lands for grazing, we located during 1918 in northern Michigan forty-three western grazers, and three more in the border counties of Wisconsin. They brought with them sheep worth \$520,000, cattle worth \$166,000, increased our 1918 output of mutton and fat beef four million pounds, and sold this product on the Chicago market for \$420,000 in cash. They made thousands of dollars worth of permanent improvements on the cut-over lands turned into grazing ranges, and actually made productive 324,000 acres of hitherto idle lands. We have the names and locations of these forty-three grazers and the places from whence they came. We expect many more in 1919, having on hand already thirty-one applications for grazing locations this year.

We modestly figure that this 1918 success has increased our land values fifty cents per acre, making a profit for us of \$3,500,000 last year on the seven million acres of upper peninsula available land.

Some doubting Thomas asks about losses in wintering sheep or from disease or predatory animals. I heard the annual report of the president of the Utah Wool Growers' association last year. He said the losses for the year had been held to about ten per cent of the flocks. This is their annual approximate estimate. Blizzards and killing cold come suddenly there and work havoc.

Here we know our winter, and are capitalizing its vigor. At Phillips, Price county, Wisconsin, they wintered 5,200 sheep in 1918 with a loss of 1.4 per cent. Our predatory animals and dogs need attention and banish-

ment, but they are not to be compared with the western pests.

It is a well known fact that the best and sturdiest stock is raised in the colder countries, with their surplus of climatic energy. That is why Texas is sending her young beef north to be fattened and invigorated. A four year old steer in the north will weigh a third more than a Texas four year old.

Meantime Milwaukee, acquainted with the rare opportunities offered in this line by northern Wisconsin, had enthusiasm. This greater Cloverland extends between the 45th and 47th degrees of north latitude and from the 84th to the 97th degrees of longitude west. That means northern Michigan and Wisconsin and a part of northern and eastern Minnesota. It is not an arbitrary line, but an elastic opportunity.

The U. S. government says that there are 30,000,000 acres of cut-over lands in these three states. The conditions of our north country vary but little, and united in effort they will become the greatest livestock and dairy country in the world.

Here are some illuminating figures:

The value of all live stock on farms and ranches in this country on April 15, 1910, was \$4,925,000,000. The dairy products alone in Wisconsin in 1917 amounted in value to \$150,000,000.

There are today 65,000 farmers in greater Cloverland, with room for 200,000 more.

Hay is the raw material of the livestock industry. The value of the 1914 hay crop in Greater Cloverland was, in dollars, greater than the value of the hay crop in Oklahoma, Colorado, Montana, Wyoming, New Mexico, Utah and Nevada combined.

The Cloverland annual hay crop is worth twice as much as the hay crop in Wyoming, the foremost sheep state, and three times as much as Texas, the premier cattle state.

Comparisons carefully studied will be worth the reading.

The assessed valuation of greater Cloverland is greater than the assessed valuation of Utah, New Mexico, Wyoming and Nevada combined. Its area is greater by 20 per cent than the great state of Iowa.

The population today of greater Cloverland is greater than the population of Utah, New Mexico and Idaho combined. Greater Cloverland spends

more for its public schools than Nevada, New Mexico, Wyoming and Arizona combined.

The savings bank deposits of greater Cloverland are larger than the savings bank deposits of North Dakota, Montana, Wyoming, Colorado, New Mexico, Idaho, Nevada and Arizona combined.

This grazing campaign, the forerunner of small farm development, will multiply our resources over and over, and this army of dollars will come to town from time to time, directly or through the country merchant.

The upper peninsula comprises one-third of the area of Michigan, holds one-ninth of its population and has an assessed valuation larger than the assessed valuation of Utah and New Mexico combined. We have more wage earners than Wyoming, Nevada, South Dakota, North Dakota, Idaho, Arizona and Delaware combined.

There is not a city in Arizona, Nevada, New Mexico or Wyoming as large as Escanaba, Mich., Wausau, Wis., or Winona, Minn.

Think what it will mean when we add to Wisconsin's farm products, officially valued in 1917 at more than \$330,000,000, its share of the one hundred million dollar live stock industry. Yet last year Wisconsin, in the heart of the greatest sheep and cattle country in the world, produced only two-fifths of one per cent of the wool product of this country.

Are you content to leave undeveloped the 30,000,000 acres of cut-over lands the government now reports as available in northern Wisconsin, Michigan and Minnesota?

For years northern Michigan was the orphan child of the Wolverine state. They traded Toledo for our section eighty years ago and were mad about it for half a century. We combatted stories of perishing cold, savage Indians, wild animals and arid lands year after year. We paid higher railroad fares, bore up under discriminatory legislation and ate at the second table until the worm finally turned. We started talking a separate state, the good state of Superior. We got our country and its immense resources advertised from coast to coast as the prospective new state, and then we went to our legislature at Lansing and confessed that while we did not desire to become the state of Superior we were forever through

(Continue d on Page 6)

CLOVER LAND

Marquette County, Largest in Michigan, Has Fine Sheep Record

MARQUETTE county is the largest county in the state of Michigan. It covers an area of 1,870 square miles, or 1,196,800 acres. The state of Rhode Island contains only 1,248 square miles, while Delaware is a trifle larger with its 2,370 square miles.

The county is known throughout the country as the Iron district of Michigan. There are in existence today thirty-three working mines. Although the county is famous for its iron production, there is no reason why it cannot become famous for its livestock and field crops. There are today in round numbers, 900 farmers in the county owning approximately 100,000 acres. This is only one-twelfth of the total area of the county. There are fifty complete townships in the county six miles square besides several smaller ones made such by the frontage on Lake Superior. There are nineteen of these townships without a farmer owning an acre of land and twenty-one more with only a few, or in other words, most of the existing farms are located in ten townships.

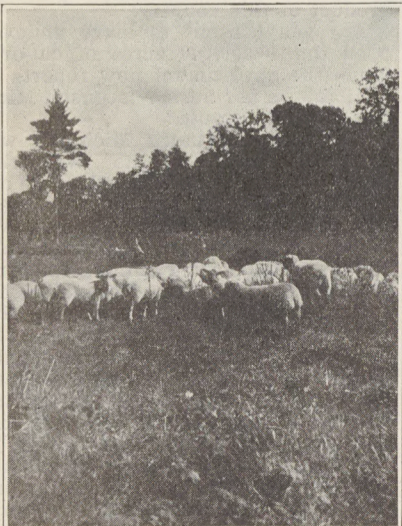
Some would naturally think that the best land would be taken up by the first settlers. This is only true in this way: The best land near a mining town or lake port. The land too



Inside Mr. Roberts' winter shed. This shows what has been done, although we do not recommend so many cracks in boards.

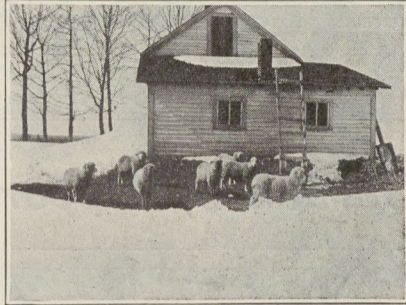
far from market or from a good road has been last to be taken up by the settler even though the soil and other natural conditions are the best. The natural results that have followed are that the best agricultural township in the county has not a farmer within its border and its northern boundary line is only nine miles from Ishpeming, a city of 13,000 population.

The surface geology of the northern peninsula of Michigan, Publication No. 7, by Frank Leverette, classifies the soils of Marquette county as follows: Swamp 389 square miles; rocky knobs



George Roberts' sheep in pasture on Sept. 15, 1918. Notice the lambs.

By DUNCAN L. McMILLAN



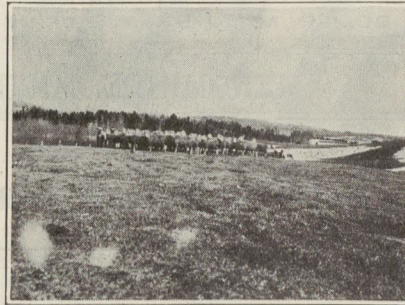
Sheep on A. G. Johnson's farm, near Skandia

475 square miles; clay till, 13 square miles; sandy till, 586 square miles; sandy, 38 square miles; and sandy gravel, 369 square miles.

The swampy areas comprise about 21 per cent of the total area, but when the timber is all cut and the streams cleaned out a large part of this area will be naturally drained and the rest or at least most of the remainder can be readily drained. Twenty-five per cent of the area is so-called rocky knobs and ridges. The actual area embraced in the knobs is much less than this figure as given by Mr. Leverett, as he has not taken in consideration the areas between knobs or ridges which in many instances are owned by farmers and excellent crops grown. These knobs and ridges are in many instances, in fact in most instances, covered with small growth of timber and grass wherever the rock is covered with soil. There are thirteen square miles of clay till in the county. Eight square miles of this is in a county without a settler and the other five square miles is in a township with only a few farmers as yet. Over thirty-one per cent, or 586 square miles of the soil of the county is known as a sandy till and this is all good farming or the best of grazing land. The clay and sandy till areas total more than the entire size of many southern peninsula counties. There are 38 square miles of sandy soil and 362 square miles of sandy gravel. This sandy soil is usually fairly level and covered in the summer with sweet fern, blue berries and a wild grass. This class of soil has not been worked to any extent as yet, in fact it is doubtful if it will ever make profitable farms, but it seems to the writer that it can and will be used for sheep pasturage. It is believed that this lighter soil will maintain at least one sheep to the acre during the summer months.

The soil, streams, surface conditions and climate make Marquette county an ideal county for sheep. There are sections after sections and township after township without any farmers waiting for a settler to clear the land and make it into a farm or for a herdsman to pasture his sheep or cattle. There are thousands of acres of good grass and clover going to waste every year.

In 1910 there were 185 sheep in the county. There were about this same number in 1916. During the summer and fall of 1917 the county agent put on a sheep campaign with the results of putting breeding ewes on forty farms. Pure bred Hampshire rams



George Starkey's sheep at Republic, March 19, 1918

were purchased and these ewes were bred to pure bred rams. The banks of the county aided in the purchase of the ewes. The farmer who wished to do so could pay half of the purchase price and the bank took a mortgage on the sheep for the balance. The banks were made secure by the mortgage and also by the backing of the County Farm Bureau organization. The sheep were brought into the county in November of 1917 and today the sheep are all paid for and no mortgages foreclosed or even thought of.

Complete records have been kept of some of these sheep and the following are given: Andrew G. Johnson of Skandia purchased eight yearling western ewes at a cost of \$120. They cost him \$19.20 to winter, including labor; \$4.00 to shear. He lost one by choking to death. Interest on money invested \$7.20. He received \$30 for the wool, \$105 for the lambs, and sold the seven remaining ewes at \$105. The manure was estimated at \$5.00. This gave a net return of \$94.60, or \$11.82 per head. He had a 100 per cent drop of lambs and saved them all.

George Roberts, also of Skandia, bought 22 yearling ewes and a pure bred ram. His total cost was \$364. The expenses for the year were \$121.30. Mr. Roberts had never sheared sheep and he did the job himself at a cost of \$18. He learned how, so it will be less next time. Mr. Roberts received \$97 for his wool. He had a 90.5 per cent drop of lambs, but saved only 74 per cent because a brood sow helped herself to several of the newborn. Even at this loss he made a net profit of \$6.55 per head. Mr. Roberts was so well pleased that he has bought several more and intends to make sheep his major farm crop.

Louis Ahola of Republic purchased four aged western ewes at a cost of \$51.32. He had a 100 per cent drop of lambs and saved them all. His total expenses were \$26.00. He sold the wool for \$24. and valued his four lambs at \$40 and manure at \$6.00, leaving him a net profit of \$11 per head.

George Starkey of Republic purchased 50 aged ewes and two Hampshire rams at a cost of \$701. They cost to winter with other expenses \$399.23. He lost six by death. He received for wool \$189. He raised 41 lambs valued at \$451. Estimating the value of the manure at \$150, gives him a net return of \$390.77, or \$7.51 per head on his original 52 head.

Table showing the results of the four flocks given above:

Size of Flock	Value of Flock	Total Expense	Return		Net Flock	Return Per Head	% of Born	% of Saved
			Wool	Lambs				
8	\$120.00	\$ 45.40	\$ 30.00	\$105.00	\$ 94.60	\$ 11.82	100	100
23	364.00	121.30	97.00	150.00	151.00	6.55	90.5	74
4	51.32	26.00	24.00	40.00	44.00	11.00	100	100
52	701.00	399.23	189.00	451.00	390.77	7.70	94	87
87	1236.32	591.93	340.00	746.00	680.37	36.07	384.5	361

Average flock, 21 head.
 Average value per head, \$14.21.
 Average expense per head, \$6.80.
 Average return for wool, \$3.92.
 Average return for lambs, \$10.97.
 Average net returns of flock per head, \$7.82.
 Average per cent. of profit on investment, 55 per cent.
 Average per cent. of lambs dropped, 96 per cent.
 Average per cent. of lambs saved, 90 per cent.

There are today approximately 2,000 head of breeding ewes in the county. Every man who has sheep is very much pleased. Many more of the farmers would have sheep but fencing has been prohibitive in price. Several sections of the county have been pastured during the past summer by sheep brought in from the west and one man, F. K. Hewlett, is wintering a herd of over a thousand breeding ewes.

There are many inquiries received in regard to wintering sheep in this section. Mr. Roberts of Skandia wintered his sheep in an open shed and he has told me that the sheep preferred sleeping outside most of the time all last winter, going inside only during stormy weather. The accompanying views will show Mr. Roberts'



George Roberts' open sheep shed at Skandia, March 15, 1918

shed. The sheep came through the winter in fine shape. Before lambing season Mr. Roberts lined the shed with building paper and battened the cracks so that he now has an ideal shed for wintering his sheep.

From what has been said about the size of the county, about the soil, the climate; the large areas of cut-over land available for pasturage and for the settler, and from the reports of the small flocks kept during the last year, it looks as though Marquette

(Continued on Page 58)



Type of ram used with western ewes, in Marquette county

CLOVER LAND

Barley a Safe Feed to Substitute for Corn

By J. W. WESTON of Marquette

BARLEY is one of the most widely cultivated of cereals, growing as far as 60 degrees north, in Skagway, Alaska, to the southern limits of Arizona and California.

Barley is similar to the oat in that it does better under cool moist conditions. Early planting is as essential as with oats or spring wheat. Good drainage is essential to the production of good crops of barley, although it does not require as much soil moisture as is needed to produce a crop of oats. Barley does well on most soils except the very light sandy soils, but seems to favor the better sand loams and clay loam soils. It grows better on alkali soils than the other small grains. Northern Michigan, Wisconsin and Minnesota are very similar as to character of soil, climate and rainfall and according to the records of the United States Crop Report for the last ten to fifteen years, shows that Upper Wisconsin leads in the yield of oats, wheat, rye and clovers, and barley. According to the same report, the following table compares the three states as to yield and profit of the crops of barley and corn per acre:

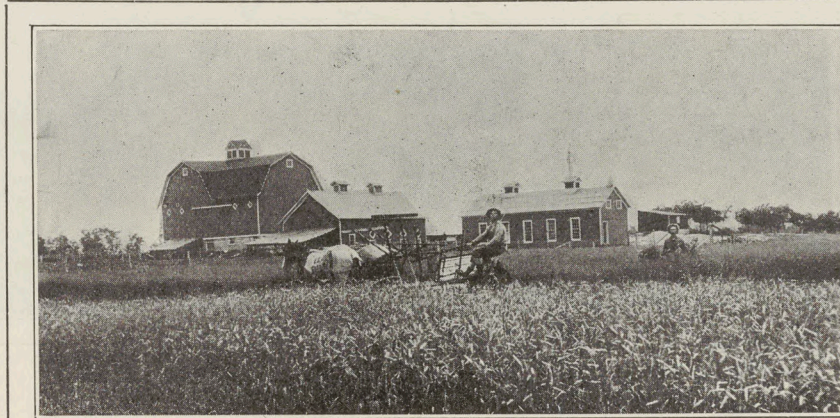
	Barley		Corn		Barley 10 Yr.		Corn 10 Yr.		Value Per Bu.		Value Per A.	
	Per A.	Yield 1917	Per A.	Yield 1917	Average 1908-1917	Average 1908-1917	Average 1908-1917	Average 1908-1917	10 Yr. 1908-17	5 Yr. 1912-16	Barley	Corn
	Bu.	Value	Bu.	Value	Bu.	Bu.	Bu.	Bu.	Barley	Corn	Barley	Corn
Michigan	26.5	\$31.54	21.5	\$39.13	25.8 Bu.	31.7 Bu.	.73	.78	\$17.85	\$22.76		
Wisconsin	32.0	39.68	22.5	35.86	28.9 Bu.	33.3 Bu.	.74	.78	19.90	23.52		
Minnesota	27.0	29.97	30.0	33.00	24.0 Bu.	32.6 Bu.	.64	.60	13.35	18.64		

The total cost of producing an acre of barley averages \$15.60, while corn, cut, shocked and hauled in from field costs about \$27.21. The difference in value balances the difference in cost of production. Strangely, there is a rather widespread state of prejudice existing against the use of barley for stock feeding in this country, some even believing that it is poisonous to farm stock. Perhaps the brewers' desire to control the entire use of this crop, have furthered the prejudice. This idea should be discarded as belonging to the obsolete class of farmers for the experience of the Old World is against it. In fact, the experience that the exhibitors at the International had in 1916 demonstrated that barley in this country is a vital factor in fitting animals up to the pink of condition for show purposes.

The grand championship in the fat steer class, single entry, was awarded to California Favorite, exhibited by the University of California. A calf of Shorthorn-Hereford cross, weighed in under 14 months of age at 1,130 pounds and notwithstanding the wonderfully even and deep fleshing of the calf, he was brought to this perfection of bloom without the use of any corn in his ration. He was carried on a nurse cow and was fed three times a day on a ration of two parts barley, one part oats, and one part bran with alfalfa hay for roughage.

The nearest competitor for the premier honor of the show was a pure bred Angus, given the reserve championship, also shown by the University of California. This animal showing wonderful width and depth, weighed into the ring at 1,850 pounds, two years old last January and was fitted without the use of corn. At this same International, in the Shorthorn breed in the aged bull class, Burnbrae Sultan, owned by A. F. and G. Auld of Guelf, Ont., took first award in this conspicuous class and the excellent finish on this animal was attained also without corn, his ration consisting of barley, roots and clover hay.

Barley has been devoted almost wholly to brewing. The use of barley will become more common with our stockmen when its value and special



Barley field, John Foster farm, Newberry

advantages are better known.

The Arabs maintain their horses almost exclusively on barley, the grain being fed unground. Barley is a common feed for dairy cows in northern Europe. The Danes sow barley and

stated by good authority that barley is beneficial in its influence on the quality of milk and butter. This grain is used extensively in England and northern Europe for pork production, giving fine quality both as to hardness and flavor of the meat.

In ration experiments with lambs at the Wyoming experiment station, Laramie, Wyoming, it was found that for 100 pounds gain produced by native hay rations with corn or oats, the cost ranged from \$8.48 to \$9.07 with the exception of the native hay and hulled barley ration, which produced gain at a cost of only \$7.38 for 100 pounds. This lot ate about the same amount of hay as the other lots, but ate less grain than those fed on oats,

and made larger gains than the corn-fed lot.

The sections above mentioned, Northern Michigan, Wisconsin and Minnesota, are too far north and the seasons too short and cold, for the economic production of corn, and according to the feed analysis, it shows that the digestible protein is considerable higher in barley than in corn.

The carbohydrates in this grain fall a little below the corn, but exceed those in oats while it has less oil than either oats or corn.

Average digestible nutrients in 100 pounds of corn and barley:

	Dry Matter In 100 lbs.	Protein	Carbohydrates	Fats
Barley	89.1 lbs.	8.7 lbs.	65.6 lbs.	1.6 lbs.
Corn	89.1 lbs.	7.9 lbs.	66.7 lbs.	4.3 lbs.

However, for those living in a section where the growing of corn is a "gamble," and barley is a surety, with approximately the same feeding value for livestock, as well as being able to produce an approximate equivalent amount of grain per acre, with the experience of the experiment stations in Europe and America showing that barley leads the cereals in the quality of pork production, and takes the place of corn in beef production; that barley proves beneficial to cows, fed heavily with roots, since it counteracts their laxative effect; that barley has proven a satisfactory sheep feed and that barley crushed or rolled supplies a palatable and acceptable feed for horses at all kinds of work. These facts make the growing of this adaptable crop more attractive, strengthens our weak spot, a substitute for corn, and makes this strong point, barley, stronger.

The Testimony of R. L. Ruddick

A Minnesota Live-stock Expert

FEW men in greater Cloverland are more competent to discuss the livestock business than R. L. Ruddick of Minneapolis, for many years a resident of the north country and now actively interested in livestock and packing.

About a year ago B. G. Packer, Wisconsin's commissioner of immigration, wrote Mr. Ruddick for information on the success of his grazing experiments on a large tract of cut-over land in Barron county, Wisconsin, and received the following interesting and forceful testimony from Mr. Ruddick. It makes intensely interesting reading at this time. Mr. Ruddick said:

"We have not had any cattle on our pasture for some time for the reason that we couldn't get a competent man to look after them and Mr. Rogers and the writer were too busy with

other business to give it any time.

We have fenced in Barron county, between the stations of Mikana and Brill, about 2,200 acres, with seven barbed wire. We are bothered a little with deer flies along the latter part of June or the first of July, but as the land is cleared of brush, they seem to disappear and they don't bother the cattle nearly as much as some people think. Mosquitoes are also bad at times, but notwithstanding this, the last bunch of cattle that Mr. Rogers and I had over there were sent over on July 17th, all cows and heifers, something over 200 head, as I recall it, and my recollection is that they were sold on Oct. 20th and had made a gain of 158 pounds per head; but I would not advise the ordinary man to ever buy cattle in the spring and put them on the pasture with the expecta-

tion of selling them in the fall and making any money, for as a rule, he is buying them at the highest point in the year and selling them at the lowest, but a good profit is possible if he is equipped to carry cattle through the winter on cheap roughage, such as silage, fodder and cheap hay and straw.

I don't think he could get into any more profitable business than buying cheap cattle in the fall and roughing them through the winter, pasturing the next summer and selling them in the fall, either for feeders or grass beef or feeding them out if he has the feed. That is the greatest natural pasture land that I have ever seen and raises the finest blue grass and clover outside of Kentucky and it has got Kentucky beat in that it doesn't dry out in July and August. I think the Iowa, Illinois and even the Indiana farmer and cattle feeder, who has a carload of cattle or more could well afford to ship these cattle up into pastures and ship them back again for corn feeding later and the freight and expense of pasturing them in Wisconsin would be much less than the interest on high priced lands in these states.

It is not necessary to have any cleared land, unless you are going to farm. The hardwood stumps rot out, the pine stumps heave out with the frost to some extent, but they will be there a thousand years from now unless you pull them or blast them, but they don't hurt the pasture, except the room they take.

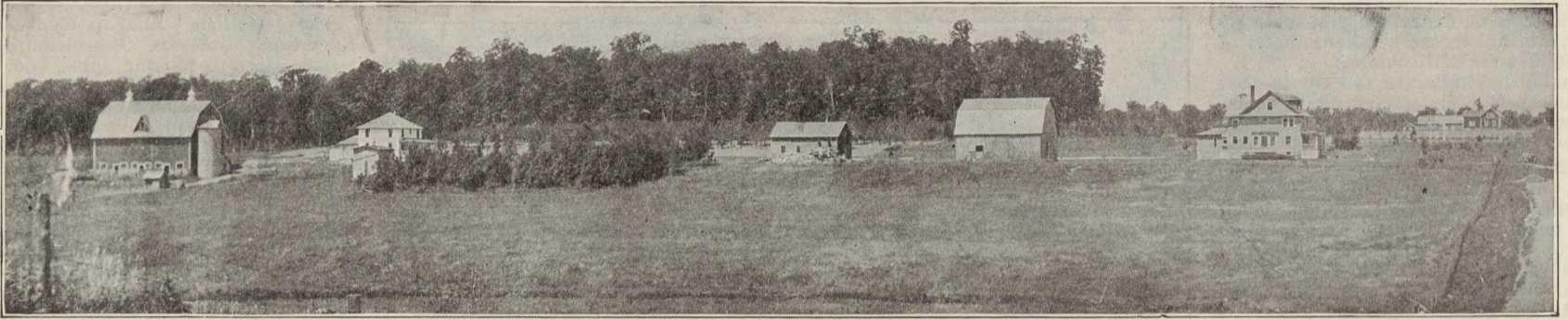
Now, I would not advise any man to go up there and put cattle in on land thickly covered with brush, for if they do, they are going to be terribly disappointed. The sun must get to the grass in order to put any nutrient into it and cattle will not do any good on browse alone—for that kind of pasture they must have sheep. It is absolutely necessary for the land to be fenced unless they intend to herd their stock."



Two and one-half tons of hay per acre, one cutting. Cloverland is an ideal hay and small grain country

CLOVER LAND

Cloverland's Great Possibilities as a Farming Country



THERE has been so much written and said about the possibilities of the Upper Peninsula of Michigan, or Cloverland as it is called, as a livestock country, that its possibilities as a farming country may be somewhat overlooked, or at the best, underestimated.

Delta county, located in the central part of the peninsula, on the southern border, is admirably located for both livestock raising and general farming. Besides having the natural resources that tend to make the livestock business a success, it has a sandy loam soil and more favorable climatic conditions than some of the countries farther north in the peninsula, and is therefore a little better adapted to the raising of a greater variety of crops.

Among the crops that grow successfully in the county, we find the following:

Clover

Clover grows abundantly on all the hardwood cutover lands, along the roads, in the fence corners, and in fact in every spot where there is enough open space to allow the sunlight to strike the ground. This white clover seems to spring like a weed and makes excellent pasture. Red clover and alsike grow abundantly when seeded, the red clover especially, giving a large amount of hay of excellent quality. Is it any wonder that this section with its many streams and favorable pasture conditions is attracting many livestock men from nearly every state in the Union?

Potatoes

The real cash crop that the farmers depend upon is potatoes, and this is only the natural sequence of things where the soil is a sandy loam and clover sod can be had for the potato field.

The most successful potato men follow the practice of leaving this clover the second year, and cutting one crop and top dressing the field with barnyard manure to secure as large a growth of clover as possible to plow under that fall. This practice puts the fertilizer in the ground in the form of clover and has given excellent results in potato fields.

A step in the right direction has been taken for next year by nearly one hundred farmers, who have shown a desire to standardize the potato industry, by growing one variety. A carload of Green Mountain seed has been distributed in small lots of five to ten bushels to each man. These will be planted along side of the variety he is growing now, and, in case they prove better, will be adopted by each man as the variety to grow. These men will also practice hill selection, maintain a separate seed plot, adopt better cultural methods, and in general use the methods that have given the best results in older sections.

The quality of the potatoes grown here are excellent, and yields of three and four hundred bushels per acre are

often obtained under general farm conditions.

Peas

The next important money crop is peas, and one section of the county in particular has built up a reputation as a marrow fat pea section. Yields of from twenty to thirty-five bushels are obtained, and prove a very valuable crop to raise. Another use that is being made of peas is oat and pea silage, and this is proving a very satisfactory substitute for corn silage.

Oats

Among the grains, oats are raised most extensively and excellent crops are secured. The average yield is about forty bushels, although yields as high as one hundred bushels per acre have been secured. With a little better attention to preparation of the land and the treatment of seed for smut, better average yields for the county will undoubtedly be secured.

Barley

Barley is next in acreage of the grains raised, and should be raised on a much larger scale than it is at the present time. When ground, it makes an excellent feed to use in combination with oats, and can be used in place of corn in many of the livestock rations. In fact, a bushel of barley is nearly equal to a bushel of corn in feeding value, and is a much surer crop in the county. It fits well into our rotation of hay, potatoes and oats or barley seeded down.

By B. P. PATTISON of Escanaba

In connection with barley an incident came up this summer on the farm of Louis Harmon, Cornell, Mich., which proved to be a very good demonstration. The writer had been advocating Oderbrucker barley for the county and secured some seed from the state experiment station farm at Chatham at twenty-five cents less per bushel than seed houses were asking. This barley was sown on the twenty-sixth day of June and yielded 585 bushels from eight and one-half acres, or approximately seventy bushels per acre. Considering the late date at which this field was sown, the yield is all the more exceptional. The writer cannot urge too strongly that the farmers in the county secure some of this seed from Mr. Harmon, as he has consented to hold it for that purpose.

Wheat

The raising of spring wheat received a great impetus as a result of the government's call for more wheat, and some surprising results have been obtained this past spring. Many farmers will raise wheat for their own use who never raised it before, but the raising of wheat on a commercial scale is not being recommended.

Fall wheat is more or less of a gamble, although the writer feels that it has never received a fair trial and must be sown in August to produce a good crop.

Rye

Fall rye is being pushed and should take the place of fall wheat since it

will produce a crop under more favorable conditions and grow on soil that wheat will fail on. In this connection Rosen rye, which has been developed at the Michigan Agricultural College, is being advocated, and several fields have been planted this fall. This pedigreed rye differs from common rye in that the heads fill out, leaving no blanks and it outyields common rye from five to fifteen bushels per acre. Thousands of bushels are being grown in Michigan with a state average of thirty-two bushels per acre. Where a fall grain is desired this is without a doubt the kind to sow.

Nearly everything that grows in the so-called good farming country is also found in gardens here, including such products as celery, tomatoes, cabbage, cucumbers, etc.

Railroad transportation in the county is of the very best, while good roads are considered one of the necessary things and have been developed to a larger degree than in many sections that are much older.

Excellent markets are within a night's ride, and with good hardwood cut-over lands selling at from \$10 to \$15 per acre, outside parties are bound to become interested. Let us remember, however, that, although this section of Cloverland is all that is claimed for it in a livestock way, and though we admit the more livestock we have the better we will farm, yet we can enjoy a little more satisfaction with the knowledge that other things besides livestock grow abundantly, and it might be advisable for the government to investigate our cut-over lands before it starts the costly reclamation of swamp areas for the returning soldiers.

Greater Cloverland—a Garden of Opportunity

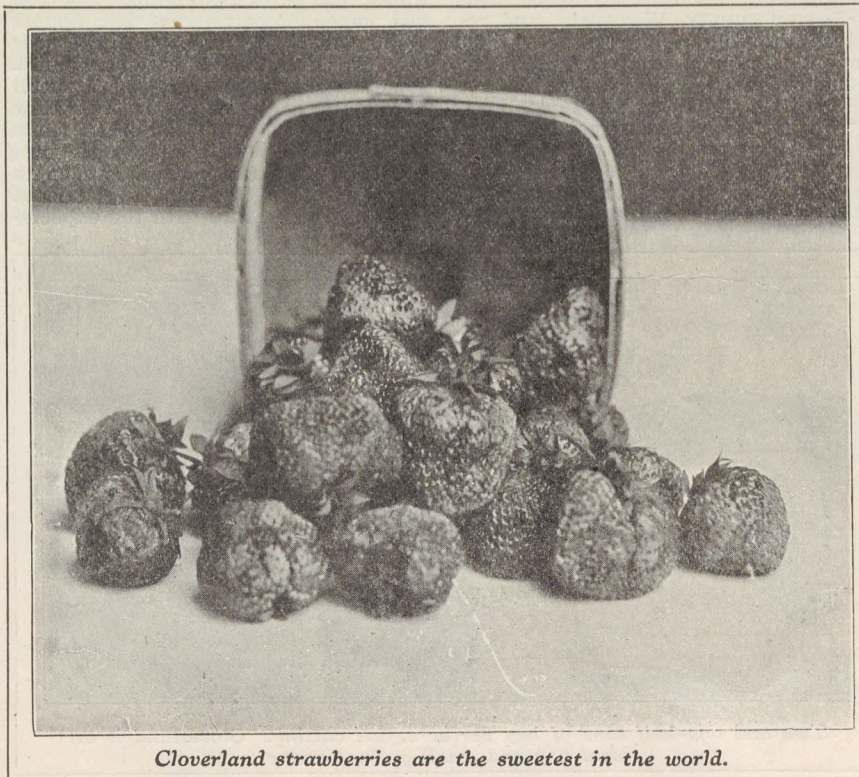
(Continued from Page 3)

being the state of "inferior." Now we belong to the senior class.

The same campaign for greater Cloverland, enlisting the enthusiastic co-operation of the men of vision of northern Michigan, Wisconsin and Minnesota, and backed by the dollars and support of business men who want more business for themselves and their cities, will make greater Cloverland what it is sure to be sooner or later, "the greatest livestock and dairy country in the United States, if not in the world."

If you believe it, get on the job today with something more than conversation. If you doubt it, get out of the way and let men run who can run.

Baraga county farmers would like to have a creamery located at L'Anse or some other convenient point in that county.



Cloverland strawberries are the sweetest in the world.

CLOVER LAND

Iowa Cattle Man Has a Profitable Cloverland Ranch

By L. T. BOWERS

CLOVERLAND is widely spoken of as the ideal place for increased mutton and wool production. I know this is true. Every farmer who has had any experience with sheep has had excellent results, but I want to tell of my experience with cattle grazing in Cloverland. Two years ago I bought 2,000 acres of cutover land in Cloverland, near Ralph, Michigan. Before buying I had spent considerable time in many of the western and northwestern states, but as soon as I visited this section, I was thoroughly convinced that this was the future cattle grazing section of the country. I have two sons who are interested with me in this ranch, and I am sure that they will always have a dependable range in years to come. We call our ranch "Maple Lake Ranch." There is a beautiful lake, covering about 80 acres, situated about in the center of the ranch.

This cutover land is of the best of soil. It will grow bumper crops of all feed necessary for livestock raising. Barley is the main fattening grain crop.

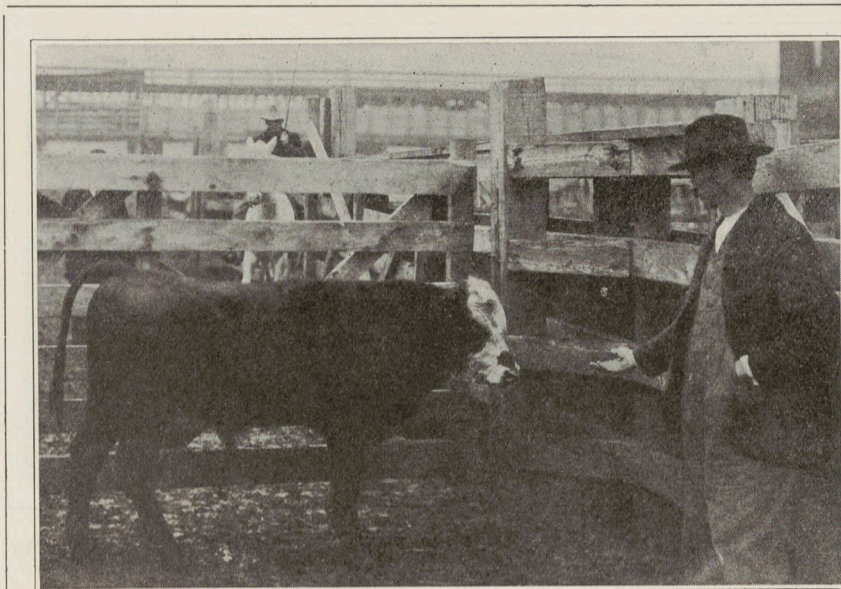
I have found the climate, the rainfall, the natural water supply from lakes and spring creeks, the growing season for clover, alfalfa, all kinds of small grains, root crops and pastures, all most favorable for livestock raising.

We are handling the very best of beef cattle. On this ranch we are running a bunch of breeding stock and shipping in two-year-old steers for summer grazing. We had some steers that were shipped from Iowa when they were yearlings and grazed two summers on this ranch and shipped to Chicago on Nov. 7, 1918, that brought us over \$130 a head right off of the grass. A picture of these steers is shown on this page.

You will also find on this page a picture of one of my spring calves which was born when I was shipping my cows from my Iowa farm to my Cloverland ranch. This calf brought \$60 on Nov. 7, the day the false peace rumor was circulated, which caused a falling off in the market. On a normal market he would have brought at least \$10 more.

I have been in the cattle business all my life in Iowa, where land now sells for as high as \$300 an acre, but I never had cattle gain in flesh, or do better generally, than my cattle have done the past two seasons on my Cloverland ranch.

Cloverland is a natural grass country. We never have dry pastures in July or August, and the grazing season is as long, if not longer than in Iowa, because of the fact that the pas-



One of Mr. Bowers' Cloverland calves, born in May, 1918, sold in Chicago Stock Yards on Nov. 7, 1918, for \$60. The false peace rumor on that date took the price down from \$70 to \$60.

tures stay green all summer, instead of drying up during July and August.

This cutover land had considerable brush and slashings on it when I purchased it, but firing it once cleaned it up quite a bit, as shown by an accompanying illustration. Now, by scattering blue grass where the fire has run, there will soon be a permanent sod formed. Clover, timothy and blue grass grow very thick along all the old logging roads where the seed became scattered when the lumber was being hauled out.

I still make my home at Brooklyn, Iowa. We have one of those wonderful Iowa farms. Iowa is, as all you readers know, one of the greatest corn and general farming states in the world, but the land is getting pretty high. I want to graze cattle in larger numbers than I can afford to in this state. Cloverland is just the place for extensive cattle grazing operations, for one who is not backed by unlimited capital.

We can raise everything in Cloverland, with just as big yields, as in Iowa, with the single exception of ear corn. Fodder corn does very well there. I am convinced that it is a better grass country than either Iowa or Illinois.

There is some work connected with making a ranch or farm in Cloverland, yet the land is very cheap, and by

fencing and grazing stock among the stumps, while the land is being cleared, the livestock profits will pay for the necessary improvements. In a few years we will have enough land cleared to raise our own crops for

considering the cost of raising the heifer until it becomes a cow, and the fact that the animal very often does not produce a profit on the care, feed and time in the dairy, we can readily figure a big loss to the farmer. The following records of cows in different herds in different counties show these losses:

Total milk, 1915—Cows, scrubs: No. 1, 2,788 lbs.; No. 2, 3,396 lbs.; No. 3, 3,570 lbs.; No. 4, 3,896 lbs.; No. 5, 2,439 lbs.; No. 6, 5,870 lbs.; No. 7, 2,364 lbs.; No. 8, 3,436 lbs.

Compared with these are five well-bred, 2-year-old heifers that gave over 100,000 lbs. of milk each.

Buying good cows is very expensive. Raising good heifer calves is the sure way of maintaining or increasing the herd. Therefore, great care should be given to furnishing your heifers and cows with only the best of ancestry, by using pure-bred bulls.

If the calf be given a good parentage it is poor business to improperly feed, stunt, or otherwise make it impossible for the animal to do her best as a cow. This happens, however, in some cases. It will pay to keep them vigorous, healthy and growing continually. This does not mean keeping them fat.

1. Cleanliness.
2. Wholesome food.
3. Exercise and proper protection.

These three will usually produce well-grown calves and cows.

Cleanliness must be observed from birth, lest white scours, etc. to devel-



After grazing two summers in Cloverland many of Mr. Bowers' cattle brought \$130 a head, right off the grass.

wintering our breeding stock and younger steers. Also, we can raise barley, rutabagas and clover for finishing our stock for market.

Our Cloverland grass is the best—no country has better. Since we can raise as much grain and hay, if not more, as on \$200 to \$300 an acre land in Iowa, you can readily see why I am enthusiastic over that part of the country. Clover is a weed there and the country is well named "Cloverland."

Raising the Dairy Calf

1. Keep only those from good cows and pure-bred sires.
2. Keep the calf growing until matured.
3. Don't raise bull calves for breeding purposes from grade cows or sires.

RECORDS in all dairy farming communities prove that poorly born calves, that is, from inferior cows or bulls, are always money losers for the farmer who raised them. After

oment. As the dairy calf is fed by hand on whole and skim milk, a great opportunity is offered to have dirty, sour, unkempt pails and feeding conditions. If, so, scours are produced, the calves become sick, stunted and do not thrive.

It has been proven many times and is common knowledge that skim milk-fed calves may be as vigorous, healthy and thrifty as those raised on whole milk. The milk can be just the same except for the removal of fat, and as this may be replaced by using proper feeds, such as crushed corn and oats, oatmeal, etc., excuse cannot be made that the feed is to blame for unthrifty calves.

Feeding: Always give the calf the first milk of its mother whether allowed to suckle or not. As the calf's stomach is small, it can't handle large amounts. A good rule is: Feed often and a little at a time. Eight, ten or twelve pounds per day are the right amounts to feed. Divide the day's feed into as many parts as the number of times you feed the calf. A small, weak calf taking six pounds might be

(Continued on Page 54)



Mr. Bowers' cattle brought \$13 a hundred weight at the Stock Yards, in November, 1918

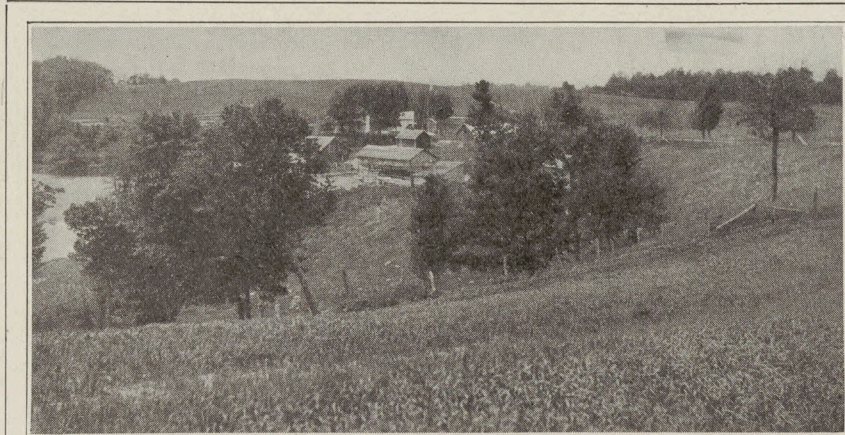
CLOVER LAND

Chippewa Valley Ranch Is the Pride of Wisconsin

VIEWING with the western sheep grazers for supremacy in making the vast area of idle cut-over lands of northern Wisconsin, northern Michigan and northeastern Minnesota profitable, corporations are being organized and large purchases are being made to establish sheep breeding ranches. Prominent among these enterprises is the Chippewa Valley Sheep Company of Milwaukee, with a capital of \$400,000, which has purchased 10,750 acres of ideal grazing land in the Chippewa valley, including five improved farms of approximately 1,400 acres. Half of these five farms is under intense cultivation. The buildings are conservatively estimated at \$25,000, and could not now be reproduced for that sum. The ranch is situated in the north central part of Chippewa county, Wisconsin, four miles west of Holcombe, on the Chicago & North-Western railroad.

While this tract is ideal for pasture and contains a sufficient acreage to provide ample winter feed for the foundation herd of 5,000 sheep, and the herd of thirty registered Holsteins and other pure bred farm stock, perhaps the most significant and the most important of this company's assets is George McKerrow, Wisconsin's grand old shepherd, who will act as supervising director of this great sheep ranch. Without exception, Mr. McKerrow has the most remarkable rec-

By HENRY A. PERRY



Chippewa Valley, Wisconsin, ranch. A natural shelter, sloping to a beautiful spring.

superintendent of the Chippewa Valley Sheep company's ranch Mr. Charles W. Scholtz, who was head shepherd for fifteen years for Mr. McKerrow, and during the last three years was superintendent of the Minnesota State Farm at Owantonna and has the distinction of being the first man who ever made the state farm yield a profit.

With such experts as these assuming active management of this magnificent enterprise the Chippewa Valley Sheep Company's ranch is not only destined to be a financial success, but will soon become a great show place and demonstration farm of the possibilities of the sheep and wool industry in the undeveloped cut-over land livestock empire of the north. Mr. McKerrow will demonstrate that the lumber barons didn't really take the cream when they carried away millions in lumber products, but actually took no more than the skimmed milk, leaving the cream of nature's wealth to fall to the sheep herder, the dairyman and the practical agriculturist.

The company has selected a distinctively attractive tract of hardwood land, all of which is a rich clay loam soil. The topography is hilly, reducing the amount of low wet soil to a minimum, contains an abundance of fresh water in streams and little lakes, with high, dry banks.

A table of estimated earnings and expenditures has been carefully prepared, based on minimum production and maximum cost in order to "play safe," which is an unusually interesting mathematical calculation on what may be expected from a well conducted, well ordered sheep ranch. A notation is made that the Wisconsin Agricultural Experiment Station during twenty years averaged approximately 161 per cent. increase per annum with sheep, but the experts employed by this company estimate their increase at 100 per cent annually, an estimate all sheep men know to be conservative, considering the fact that the company has adequate buildings and every facility for caring for lambs. The estimate of wool production is placed at seven pounds per head, which is far below normal from a herd composed of anything resembling a good breed of sheep and given any sort of care. It is proposed to add half the annual increase to the original breeding herd.

With these basic figures estimates are given for each year for a period of ten years. The result at the end of ten years, expressed in dollars, follows:

97,813 lambs at \$8.....\$ 782,504
1,914,059 lbs. of wool at 30c 574,217
42,812 sheep at \$10 428,120

Total receipts in cash....\$1,784,841

The estimated inventory of the ranch on the tenth year follows:

40,000 sheep on hand at \$10.. \$400,000
20,000 lambs on hand at \$8 160,000
10,750 acres of land at \$50.. 537,500

Total of inventory.....\$1,097,500

The operating expenses of the ranch are placed at \$58,000 annually, which, with the seven per cent dividend on the \$400,000 preferred stock, gives a net expenditure during the ten years of \$860,000. This leaves a balance of cash received of \$924,841, which, with the stock on hand and increased value of the land as shown by the tenth year inventory, makes a total of \$2,022,341 in cash and tangible assets.

The plan of the company is to clear the entire 10,750 acres during the ten-year period. Cleared land adjacent to the ranch is now worth all the way from \$50 to \$150 an acre, so the estimated value of \$50 an acre placed on the ranch at the end of ten years, is very conservative and in keeping with the "margin of safety" that has been placed upon the expected returns from the big enterprise within the next ten years.

Equally interesting are the figures given on the competitive advantages the Chippewa Valley ranch will enjoy over the western ranges. A table is given showing the advantage in the items of freight and shrinkage and figured on the basis of 250 sheep to a double deck car. These figures are:

Rate from inter-mountain points to Chicago—

25,000 lbs. per car of 250 sheep at \$1.03 per cwt.\$257.50
Feed, unloading and loading in transit 64.35
Shrinkage, 10 lbs. a head, at 10c 250.00

Total\$571.85
Rate from Holcombe, Wis., ranch station, to Chicago—

25,000 lbs. per car of 250 sheep at 29c per cwt.\$ 72.50
Shrinkage, 3 lbs. a head, at 10c 75.00

Total\$147.50

By simple subtraction it will be seen that the Chippewa Valley Sheep Company will save \$424.35 on each carload of sheep shipped to Chicago, or \$1.70 per head, annually. To drive home the importance of these figures it is shown that this annual saving on 40,000 sheep would amount to \$68,000, or 17 per cent. on its total capital stock of \$400,000.

These basic figures ought to be of value to anyone interested in sheep raising on the cut-over lands of Clov-

erland; they give a basis of calculation for increases, profits and expenditures, that will apply to any district in Cloverland; and the competitive advantages will not be materially altered when compared with any ranch, or prospective ranch anywhere in Cloverland.

The question is frequently asked by men interested in sheep raising, although not experienced and perhaps never contemplating actual engagement in the business, but at the same time they want to know "what's in it," and all about the production of wool, how quickly sheep multiply, what sheep cost and what the return and net profit will be, the cost of marketing, and all the "why's" of Cloverland being the best district in the United States, if not in the world, for sheep raising.

Here the answers to all their questions are given concretely and in concise form by the experts of the Chippewa Valley Sheep Company. Of course these figures and tables were prepared for the direct benefit of the company, but the extreme conservatism shown in all calculation makes their tables an excellent standard for estimates that may be applied to any section of Cloverland, the only departure necessary being in estimating land valuation and deductions for rocky soil that could not be cultivated or marshy areas not adaptable for sheep raising or cultivation. No



Pea field on Chippewa Valley ranch. At right, W. G. Bissell, president Wisconsin Advancement Assn.

change whatever may be made so far as the sheep are concerned, unless it would be to slightly increase all estimates of profit.

The total fire loss of Iron River during the past year was only \$2,501, the fire department having been called upon twice during the year to stretch the fire hose. This is certainly an exceptionally good record.

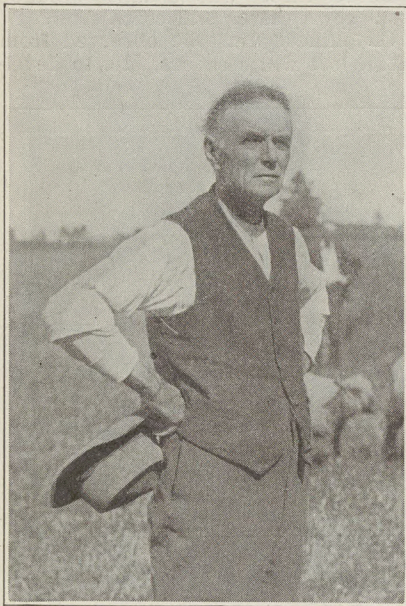
Dr. W. J. Hewson, son of Rev. R. L. Hewson, pastor of the Mitchell Methodist Episcopal church at Negaunee, has received an appointment as a member of the staff of the Ishpeming hospital.

At a special meeting of the Red Jacket council that body denied the street car company the right to increase the fare. It is said the action of the council was unanimous.

William H. Jones, district deputy supreme dictator of the Loyal Order of Moose, visited at St. Ignace, Saginaw and other cities below the straits.

The latest stunt in smuggling booze is to fill hot water bags. Victor Lilman, of Bessemer, tried the game, but was taken in by officers of the law.

The Mass Mining company of Ontonagon county returned to one-half time, or one shift in January, due to labor scarcity.



"Uncle George" McKerrow, Wisconsin's and America's "grand old shepherd."

ord in the sheep business of any man in the world. Here it is:

Fifty-seven years actively in the sheep business.

Show ring career fifty-two years.

He has imported more pure bred sheep than any other importer in America.

He has won more prizes in the show ring than any other man in the entire world, living or dead.

For sixteen years he was president of the Wisconsin State Board of Agriculture.

He has conducted farm institutes throughout every county in upper Wisconsin; he knows sheep, he knows upper Wisconsin and its possibilities.

At a sale held at his farm in the village of Pewaukee last fall he sold 136 sheep for \$13,860. His sale of pure bred sheep for 1917 totaled \$30,000.

His life has been dedicated to the upbuilding of Wisconsin's livestock industry and his name is a household word throughout the length and breadth of the state.

Mr. McKerrow brings with him as

CLOVER LAND

Ontonagon Clover Makes Cream. Will It Grow Beef?

By ROSWELL G. CARR

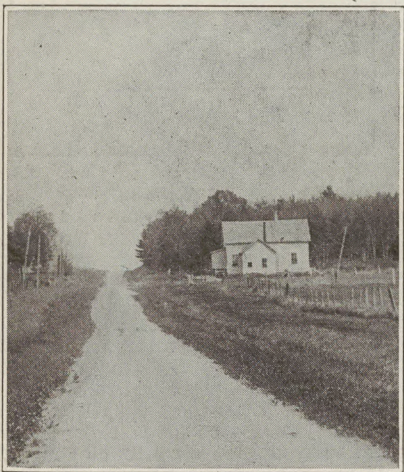
ONE evening in August of this year I drove into the little town of Ewen, which is located in the central part of the south end of Ontonagon county. It was supper time and I stopped to eat before driving on home.

At the supper table I was introduced to a man from Arizona who had come into the country that morning and had already been around a bit and talked with some of the people. He told me where he had been, who he'd talked with and what he was looking for. He wanted a place to graze and winter cattle—a whole year round proposition that would take his entire attention and be permanent.

"Well," I said, "How does the country impress you so far?"

"I didn't see any big herds of cattle or big cattle ranches anywhere around this locality." He seemed to carry the idea in this short statement and the look on his face that may be the presence of droves of cattle would make this look like a cattle country. I thought afterward of a bunch of good replies I might have made along the line that he possibly had also seen plenty of cattle in so-called cattle sections where the grass and water were much less convincing. They are certainly as essential to a real cattle country as the presence of cattle.

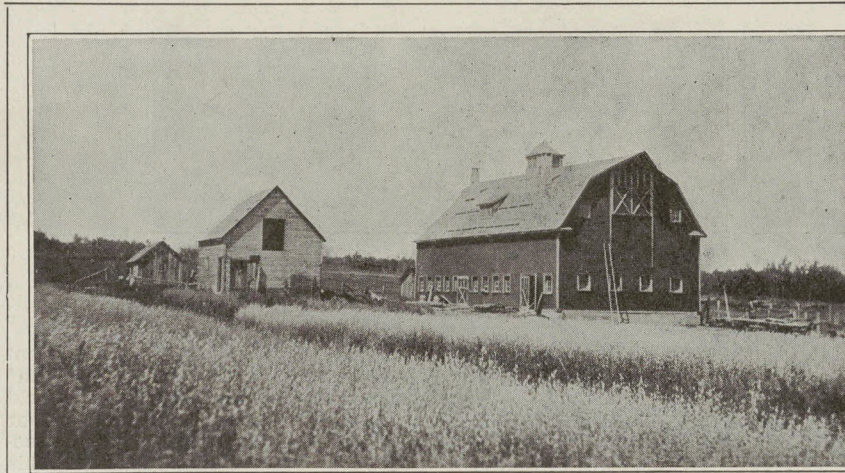
"No?" I remarked. "That's not particularly strange. Some of our local



Co-operative cheese factory at Ewen, Ontonagon county

people can't see them, either. But you, a stock man, will only have to be around here a few days when you'll develop such an ability to see into the future that everywhere you go you'll see cattle."

And so we got acquainted. He was blunt and outspoken and I was perfectly frank. He had observed that some of our farmers were not running strong to livestock and some had told him that there was no money in cattle. He could see all kinds of pasture; and hay and grain looked fine. He saw some prosperous looking places and the cattle all looked good. He agreed with me that there were always some farmers in every locality who didn't seem to be able to get on the right track and that this was particularly liable to be true where conditions were such as to make one line of farming decidedly more profitable than most others. Some men will not like that line. I told him I was convinced that livestock in some form must be the basis of agriculture in Ontonagon county. There are other branches, such as the strawberry business, that are successful, but these are specialties for the individual and not general propositions for the county.



Compare old and new barns on John Kurth's farm, Ontonagon county. New barn planned by Mr. Carr, the county agricultural agent

I spent the evening with him, stayed over and took him about the county the next day. I wanted to convince him that it was a livestock country and that the farmers with the livestock were making a success. I wanted to convince him for two or three reasons. First, I made up my mind that he knew the cattle game and I would rather hear him say, "This looks to me like a cattle country," than hear it from a thousand fellows who are not familiar with the "ins" and "outs" of the business. Then, too, of course, I wanted to see him locate in Cloverland and I had rather he would come to Ontonagon county, where I knew he would be satisfied, than to have him go to some other county, where—but then, of course, there's no use rubbing it in—especially after they've all admitted it.

And so I showed him around. I didn't show him any big herds of cattle—we haven't them. And he didn't see very many farmers with beef cattle. But he did see long and broad stretches of rolling green country bordered way in the distance by green timber. Some of these stretches were dotted quite thickly with small clearings and new buildings. Some had not been touched by human hand since the timber was removed. These had occasional clumps of second growth particularly along the streams and everywhere were covered with timothy and clover.

He did see in the edge of many a little clearing a neat, prosperous set

of farm buildings and many times he remarked at the size and up-to-date construction of a barn in contrast, as it appeared to him, to the size of the accompanying clearing. He wondered if it were necessary to have such large barns to hold the product of the clearings, and I explained to him that the barns held a bunch of livestock as well as the hay. He couldn't see the stock. They, of course, were back behind the clearings in the land yet unsettled. We found some of the cattle and while they were in good flesh still they were mostly dairy stuff. It was not difficult to show him that the dairy cow was the best proposition for these new farmers with small capital and a large amount of labor in their own families.

We talked with some of the farmers and he learned that the number of cows and young stock they kept was limited only by the amount of winter feed they could produce on their clearings and the extent of their credit with which to buy more cows. Pasture was never taken into consideration—plenty of that on the other fellow's land. He found most every farmer was borrowing about all the money he could and when he asked them what they did with it they told him they were buying cows and clearing land.

At every station he saw a string of cream cans. Occasionally we met a one-horse rig on the road with a can of cream in the back and we picked up one Finnish woman who had carried

a five-gallon can about two-thirds full for better than three miles, on her back.

The express agent's figures at one station, and there are not over sixty settlers in a radius of three miles from there with an average of perhaps twenty cleared acres on each place, showed shipments of cream amounting to 1,180 gallons for the month of December, 1,170 gallons in February, 4,120 gallons during the following June and 3,040 gallons in August. The total for the year being 24,985 gallons. He was convinced that the little farmers made the dairy business a year around proposition and it brought them returns at all times of the year. He could also see that the cows were helping the little settler prosper, not because he had a special market for dairy products, but because the pasture cost nothing, he got a big crop of clover hay and he had plenty of family labor.

I asked my companion if he didn't think those same settlers given more capital with which to get more land ready for clover hay and more cattle to eat the hay would prosper in the beef business.

"Yes," he said, "I believe they would and their wives wouldn't have to pack the stuff to market on their backs, either. But of course the beef game is quite a bit different and may be these people couldn't work into it."

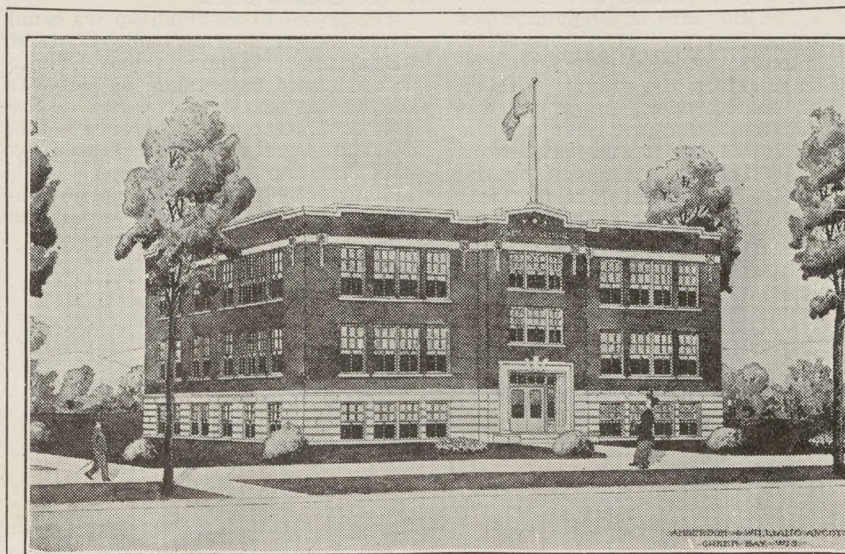


Near Bruce Crossing, Ontonagon county

I agreed with him there. And he agreed with me that the conditions which were making for the success here of the little fellow with his dairy are fundamentally right for the big fellow with his beef cattle.

We saw a few small bunches of beef cattle and sheep. He commented on their splendid condition. In some of these cases the farmer didn't seem to be prospering as well as his neighbors with the dairy, and my friend said, "Awe, he ain't in the beef business, he just thinks he is."

We got back to the hotel for supper and I again asked him as I had done the night before what he thought of the country, and he said he thought that already he could begin to see some of the large herds of cattle. The gratifying thing he had to say, however, was to the effect that while he had come into Cloverland with an idea that the possibilities had been exaggerated or that there were some big disadvantages cleverly concealed he found that we told the truth and uncovered everything. He said he could see nothing mysterious about the country, either, (it wasn't a wonderland.) There simply seemed to be a remarkable combination of good livestock conditions that had not as yet become known to the beef and sheep men.



New High School at Ewen, Ontonagon county

CLOVER LAND

Successful Land Clearing With the Aid of Sheep



Illustration No. 1

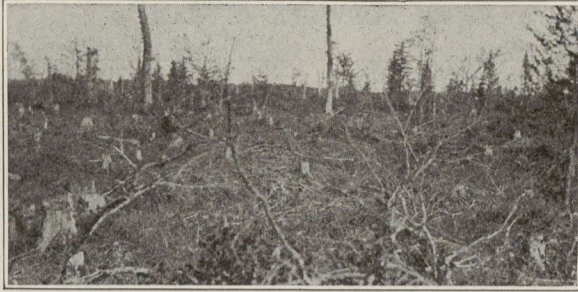


Illustration No. 2



Illustration No. 3

LAND clearing in the upper peninsula of Michigan presents many serious problems, both to the settlers and the stockmen. The small settler is almost always obliged to clear a small tract for the raising of feed to carry what little livestock he is likely to have through the winter, besides enough for a small patch of potatoes and a family garden. While this is undoubtedly true with a man owning much livestock, yet the situation with the latter is not usually as acute as with the small settler having very limited means. The man with a great deal of stock usually possesses capital enough to buy feed for all of the animals he wishes to winter over, and to clear his lands. However, the chief problem is to get enough of the cut-over land into condition for producing the maximum feeds in both instances. Both classes are interested in accomplishing the above ends at minimum costs.

We have been working with these points in mind in order that we might be better able to give out some of the desired information. Our information on the subject is limited entirely to clearing up hardwood lands. However, I feel that the same methods would apply equally well to most softwood areas, but that it would require a longer term of years with the latter as softwood stumps do not decay as rapidly as hardwood stumps.

Pictures 1 and 2—These two pictures illustrate the actual conditions with which we came in contact in clearing cut-over land, free of brush and slashings.

An area of 235 acres was cleared as shown in the following photographs for \$946.68 or at an average cost of \$4.02 per acre.

The photographs one and two show true illustrations of a tract of 235 acres of cut-over land on the Experiment Station farm at Chatham, Mich. We started clearing this tract of second growth and slashings in June, 1916. In doing this work, definite plans were laid and closely adhered to. First, there was strip about 20 rods to 30 rods wide carefully cleared and piled around the entire piece. The diagrammatic outline opposite will make clear this point. When the wind was in favorable directions to help keep the burning under control, all of the material in this strip was burned. When this was completed, men were put to starting fires over the entire enclosure at such a time when the wind was reasonably strong

and the slashings very dry. It was an easy matter to keep the fires within the enclosure at all times.

The cost of clearing was reduced fully one-half by running fire over the cut-over lands before cutting down the second growth and piling the slashings. After burning all that could be profitably handled in that matter, a crew of men were employed to cut and pile the remaining portion. The job of clearing of slashings and second growth was completed by the middle of October of the same year at a total cost of \$946.68 for 235 acres or for an average of \$4.02 per acre.

Photograph 3 illustrates how the

ture and hay. All of the different seeds are well represented. Note the grass in photograph 3. It would pasture from two to three sheep per acre now (one year from date of seeding.) It is planned to pasture this new seeding for a period of four or five years before plowing. At the end of this time, all of the brush will have been killed and the stumps mostly rotted, which will again reduce the cost of clearing to a minimum.

Note.—Blue grass was not sown in the mixture, as it comes in naturally in time. I believe that it should be mixed in, and alfalfa and Mammoth clover omitted as they often fail to grow.



Sheep on Chatham Experiment Station, Cloverland

tract looks one and one-half years from date of clearing and one year from date of seeding.

May, 1917, this same tract was seeded with a mixture of the following seeds: Timothy, 4 pounds; alsike, 2 pounds; June clover, 2 pounds; Mammoth clover, 2 pounds and alfalfa 2 pounds, at the rate of 10 pounds per acre. The cost per acre was \$1.87. This mixture of seed was scattered broadcast among the stumps with an ordinary hand seeder. The ground was not prepared in any way, nor was the seed harrowed in. It was just thrown on and washed into the soil by the rain. The seeding that developed was fairly good. After one year of reseeding itself, it will furnish excellent pas-

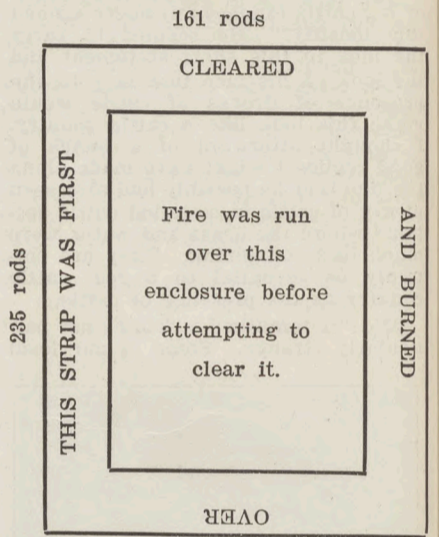
ture and hay. This piece of land is a true representation of many thousands of acres in the upper peninsula of Michigan. Note in the picture below what a difference sheep will make in one season.

Picture 5—Sheep as land clearers on the Station farm.

It is claimed that 20 sheep are equal to one man in clearing land. Contrast this picture with the one above. These pictures were both taken off cut-over land on the Station farm, and at the same time. The only difference is this one shows cut-over land grazed by sheep and the other was not.

Picture 6—The living lamb increases from this flock of ewes was 116.3 per cent, spring of 1918.

Picture 7—Picture of same flock shown in picture 6, only taken four months later. Can you pick out the lambs? This picture was taken at the same time as the one on the frontispiece. It is the same flock.



The large cut shows a flock of sheep used on the Station for more purposes than one, namely, breeding, wool production, demonstration, land clearing, etc. Note how free from brush, green sprouts and weeds the land is over which these sheep have pastured. Also, how well the stumps have rotted. Six years ago, the stumps shown on this picture were green and the field a wilderness of small second growth. Today, it has a rich growth of June grass and white clover and will pasture four to six sheep to the acre. While sheep are keeping down the brush, killing out the sprouts, causing the stumps to rot, and helping to fit the land for cultivation, they are, at the same time, increasing the soil fertility, increasing in weight, reproducing their kind and furnishing the country with wool for our backs. Thus, owners of cut-over lands, who will handle them correctly, can receive a good income from them and, at the same time be preparing them for the plow and maximum crops, besides performing a very patriotic and useful work.

Pictures 8, 9, 10, 11 and 12.—These were taken from a small portion of 140 acres on the Station farm cleared and seeded by Mr. W. F. Raven in 1912. Mr. Raven's method of clearing

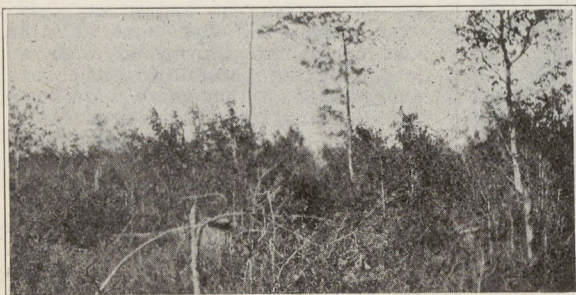


Illustration No. 4



Illustration No. 5



Illustration No. 6

CLOVER LAND



Illustration No. 7



Illustration No. 8



Illustration No. 9

and seeding this tract were very much as has been outlined. This field joins the one shown in group one and two, and is part of the same farm. It has been pastured by sheep and cattle for a period of five years and there is not a green sprout to be seen anywhere. There has not been any pasturing on this part this year. Note how thick the grass stands. It still has a splendid stand of timothy, alsike, June clover and some alfalfa.

This series represents an area fraction over five acres. The first picture in the series shows a fair sample of the whole 140 acres. The stump land shown in this set of pictures was measured and cleared of the stumps separately for the purpose of ascertaining the exact cost, per acre. There are an average of 100 stumps, big and little, to the acre. Note how they have rotted in illustration 8. Illustration 9 shows how the field looks after a man has gone through with a team, doubletrees and chain and pulled out the most rotten ones. It hardly looks like the same piece. However, it is and the picture was taken from the same point with the camera facing the same direction as near as possible.

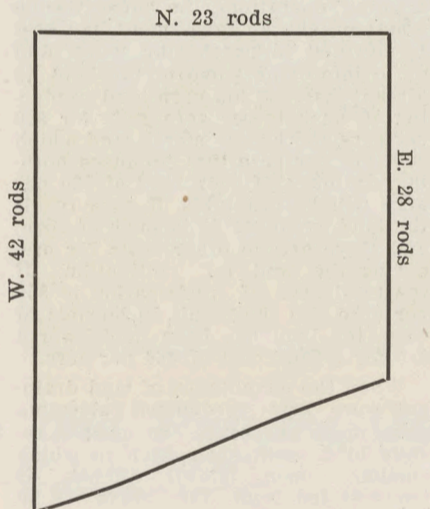
Picture 10 of this series depicts very nicely the work of dynamite on these rotten stumps. It required only 124 pounds of dynamite to blast all of the stumps remaining on the whole five acres after a man had gone through with a team, doubletrees and chain. It did not require quite 25 pounds per acre. Two hundred forty-five stumps were left on this area or 49 per acre. One pound, two sticks of dynamite was all that was needed to blast two of these stumps, or an average of about one-half pound of dynamite per stump. Had these stumps been blasted when green, it would have taken many times this amount.

Illustration No. 11 shows how the same field looks after the stumps are all piled together for burning and No. 12 will give one an idea of how it

looks after burning. From this field, we expect to make nearly two tons of good mixed hay per acre.

Picture No. 13 shows the crew of men and the equipment they used for clearing. It took a group of men 1 5-6 days to remove, pile and burn the stumps on this tract of five acres. I wish also to mention that out of this bunch of men, only two had any practical experience in land clearing. One boy was from the "Boy's Working Reserve," one claimed to be too young to get in that organization, one had always been an office man and one was from the city. I make mention of these facts and call the reader's attention to them for the purpose of explaining that these untrained chaps can be used advantageously under good supervision. Especially is this true through these times of stress. I use these boys to do all kinds of farm work.

Diagrammatic outline of tract.



The complete cost of clearing this 5-acre tract of stumps and first plowing, as outlined above is:

Dynamite, 124 lbs. at 18.75	\$23.25
Fuse, 361, at \$.708 each	2.58
Caps, 253, at 1.458c	3.69
Man, hours 110.5 at 25c	27.62
Team, hours 35 at 25c	8.25
Total cost per acre	\$24.97
Average cost per acre	\$13.08
Average cost of first plowing per acre, 1 team and man 12 hours	6.00
Total cost per acre	\$19.08
Cost of clearing of second growth, per acre	\$ 4.02
Cost of seeding per acre	1.87
Total cost per acre	\$24.97

This data shows that, even under these conditions, it will cost approximately \$25.00 per acre to clear cut-over land of hardwood stumps, brush and slashings. It is impossible to say definitely how much it would have cost to clear land of slashings and green stumps immediately after the timber had been removed. As near as I can estimate the cost as taken from the words of small farmers and settlers, it would cost between \$75.00 and \$150.00 per acre.

A summary of my arguments for the policy pursued on the station are: First, after spending the small sum of \$4.02 per acre on cut-over land and \$1.87 per acre for seed, we had it in shape to raise its first good crop, pasture. Second, this crop of pasture would support from two to three sheep per acre one year from date of seeding and about 4 to 6 thereafter. Third, that, while being pastured by livestock, the soil fertility is improving, the green sprouts are being killed, causing the stumps to rot. Fifth, that while sheep are helping to clear and improve the land, they are, at the same time, turning money over to the owner which will help support him and clear the land of its remaining stumps at the least possible cost.

Picture 14.—First crop of barley raised on land as illustrated in last series of pictures. Yield in 1918 was 49.3 bushels per acre. This is our safest substitute crop for corn.

The cost of clearing land which has grown hardwood timber will not be the same in all places as what we have obtained here. This will vary according to the many factors involved; as methods pursued or management, thickness of second growth, prices of labor, years of pasturing before removing stumps, kind of stumps, nature of soil, etc. From this it will be seen that each piece of clearing will be a problem within itself. Much of the cutover land in the Upper Peninsula ought to be cleared at a less cost per acre than the Station farm;

and much of it will cost considerably more. The above article will only serve as an aid to one in formulating the approximate cost of clearing his land.

John Anderson, convicted at Escanaba of the murder of John Malberg, in Kipling the night of November 11, was sentenced to imprisonment for life in the Marquette prison by Judge Flannigan. The murder of Malberg was the fourth in Delta county in the last seven years. In April, 1917, Arthur Lindquist was allowed to plead guilty to manslaughter for the murder of Al Fogarty. In January, 1915, George Miller, a sailor, was convicted of second degree murder for killing of a brother sailor, and last January an Indian was allowed to plead guilty to manslaughter for the killing of his wife with an axe.

A correspondent of the Menominee Herald-Leader from Koss writes: "I believe our town deserves a little boost in regard to health conditions. While all other places have been visited by the terrible influenza epidemic, we have all escaped it so far. There has been no case of sickness requiring the service of a physician here this winter. We have several residents past the age of 70 years who are still capable of doing a big day's work, none of whom have been laid up this winter on account of sickness. Mrs. C. Smith, age 84, does her housework, and is as spry as a girl. Mrs. Smith has two sons in the service, one at Camp Custer and one in France.

Thirty-four "speak-easy" manipulators of booze were sentenced at Sault Ste. Marie for a term in the Detroit house of correction. Fifteen arrests were made by the constabulary from various sections of Cloverland. Fines ranged from \$150 to \$300, and some were fined and given a jail sentence.



Illustration No. 10



Illustration No. 11



Illustration No. 12



Illustration No. 13



Illustration No. 14

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CLOVER LAND

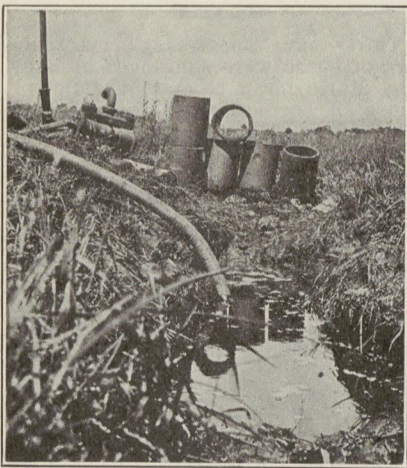
Reclaiming Water-Logged Lands Is a Profitable Enterprise

By H. COLIN CAMPBELL

ONE of the most inviting fields for land improvement work, looked at from a national standpoint, is the drainage or reclamation of land which either cannot be cultivated at all because always under water or because too wet the greater portion of the year. It has been estimated that there are in the United States somewhere between 100 and 150 million acres now classed as cultivated that could be made to yield increased returns if the land were systematically drained. The foregoing figures do not include between 80 and 90 million acres of land which have never been cultivated but which could be brought into cultivation through comprehensive drainage and thus be made to add a very substantial amount to our agricultural resources.

Although the most promising field for drainage development is perhaps in the south, there are nevertheless large areas in various mid-western states, such as Wisconsin, Minnesota and Iowa, where idle acres need the magic touch of drainage. Again, there are vast areas in the west where agriculture has for years been carried on by irrigation and where continual irrigation has so water-logged the soil that the land to again be restored to its full productiveness must be tile drained. Large sums of money have been spent in the part to reclaim the dry, uncultivated lands of the west and southwest, while millions of acres now too wet to be cultivated regularly have been overlooked. The backwardness of land drainage progress is attributed to several causes, largely to skepticism among owners regarding the prospective profits. Other causes may be considered as a lack of knowledge of drainage principles and practices, a lack of capital and lack of appreciation for the fact that expenditures of this kind must be regarded as investment and not a form of farm operating expense that reduces profits.

Drainage has been conspicuous in the far west but it has also been quite common in New York and other north-



A swamp that tile will reclaim

ern states. The government has conducted many investigations and as a result, has gradually accumulated figures which show conclusively that in many instances tile drainage has doubled and trebled crops and increased the value of the land so improved, anywhere from 50 to 300 per cent. The incentive given to increase food production, due to depletion of food supplies throughout the world because of the war, resulted in more attention being given to land drainage propositions last year than were perhaps ever given to the subject in any other twelve months.

There is sufficient proof available to convince the doubter that there is no



Draining a young orchard to lower ground water level

question as to the wisdom of investing in land drainage. Land drainage has its value not only from the standpoint of increased productiveness of the land or complete reclamation of land that previously has been entirely unproductive but also from the standpoint that the doing away with swamps and marshes effectively destroys the common breeding places for mosquitoes, which are propagators and carriers of malaria. So, drainage has a profit side from the community health standpoint.

Profits on the side of improved community health were shown in reports from physicians whose patients resided in the community. In the five years preceding the improvement by tiling these township lands, there had been recorded nearly 1,500 cases of malarial diseases, while in the five years following drainage fewer than 500 such cases had been observed. Everybody knows that sickness is expensive, therefore one should not need to be reminded that profits come from keeping well, so investments in any means that will promote better health pay big dividends.

Although the profit of health is associated with the profit of increased yield from drained lands, no doubt the bigger, better crops most interest the farmer. His working capital is tied up in these lands and unless they can be made productive, capital is not only lying idle but is being slowly consumed by the drain of taxes. Of course the first question to be answered when a drainage proposition is up for consideration is, will it pay? This can be determined by a careful survey of the land to ascertain whether drainage can be installed so that the ground water level will be lowered sufficiently to permit roots of growing crops to enter the soil the desired depth without coming into contact with the fixed level of ground water.

Land drainage regulates the soil as well as removes surplus water from the soil. Doing the latter leads to the former by opening up the soil, aerating it and thus developing a condition that retains moisture and maintains an even supply throughout the crop-growing season.

In order to arrive at the actual money value probably from a well-developed drainage system, one must assume a number of conditions. If drainage increases the yield of corn 25 bushels per acre and the corn is worth 50 cents a bushel, the returns of \$12.50 per acre would be equivalent to a 10 per cent dividend on \$125 or 50 per cent annually on a cost of \$25 per acre for installing the system. An-

other way is to consider the resulting increased market value of the property.

In considering the economy of farm drainage, it is also well to compare the probable results with similar probable returns from other investments of money. If the farmer intends to invest more money in his farming operations, he must decide whether such an investment had best be devoted to purchasing more land or to improving some of the land he already has. If his corn land producing 50 bushels per acre sells for \$80 per acre and he has marsh land which cost \$10 per acre that produces nothing, drainage of such land at \$30 per acre will be profitable, if as a result the land produces 25 bushels of corn, and there are no other costs for preparing the land for cultivation. If the total cost of reclamation is \$50 per acre and the result 50 bushels of corn, the land has been made worth \$80 for a total cost of \$60 per acre.

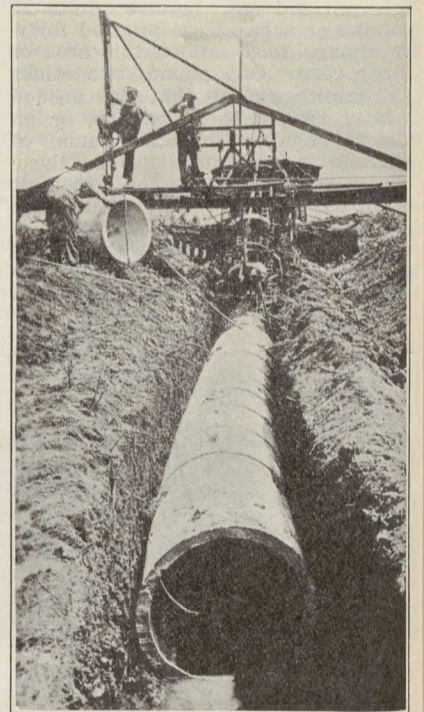
When the advantages of land drainage were first recognized attempts were made to secure the desired results by a main open ditch to which smaller open lateral ditches or trenches led from the areas to be drained. As a rule, such systems lacked suitable outlet and as a result the water level in the soil was not materially lowered. Water simply stood in such channels and the expected results were not attained. Furthermore, such open trenches, ditches, or channels interfered considerably with the cultivation of the land. The waterways naturally had to follow the land contour and this resulted in fields of irregular shape, necessitating much turning when cultivating crops in rows, to say nothing of the difficulty of getting machinery or equipment from one field to another without building small culverts over the trenches and bridges over the large ditches. In addition to these difficulties, soil erosion or washing, especially where the grade of the ditch was such as best to accomplish drainage, soon resulted in destruction of the waterway; also, neglect to properly maintain these open channels invited caving of the sides and a growth of weeds, both of which tended to destroy the efficiency of the system. Many open trenches, wherever the system involved a large district, resulted in idle acres of land from inability to cultivate them. They conditions were responsible for the increasing recognition given to the advantages of drainage by means of well constructed concrete tile drains. In such a system all waterways are un-

derground and hence offer no obstruction to cultivation because permitting all land to be cultivated. No maintenance is required on such systems—once done properly, the work is done, for all time.

The underground concrete tile drain system may be laid to greater grade than the open waterway without fear of soil erosion, in fact the increased grade contributes to keeping the drain open from the more rapid flow of water. Many persons are surprised to learn how a large open ditch may be replaced successfully by tile of relatively small diameter. Only where a drainage improvement contemplates the reclamation of vast areas of flat lowlands where the volume of water to be handled exceeds the capacity of the largest sizes of tile obtainable, should the open ditch be considered. Careful estimates of the flow in many open channels will prove that the ditch was only an apparent necessity—not a real one.

In the process of manufacturing concrete tile, no warping takes place. The product is always true to shape, therefore easy to lay with close joints, so that earth will not get into and clog the drain. As in the manufacture of any other product, however, best results come from following certain fundamental principles of manufacture. The farmer interested in drainage should not attempt to engage in the manufacture of concrete pipe or tile since much time, experience and special facilities are necessary to produce tile of high grade. Established and well-equipped tile plants should be patronized—plants that are equipped with all of the modern facilities recognized as essential to success in pipe or tile manufacture.

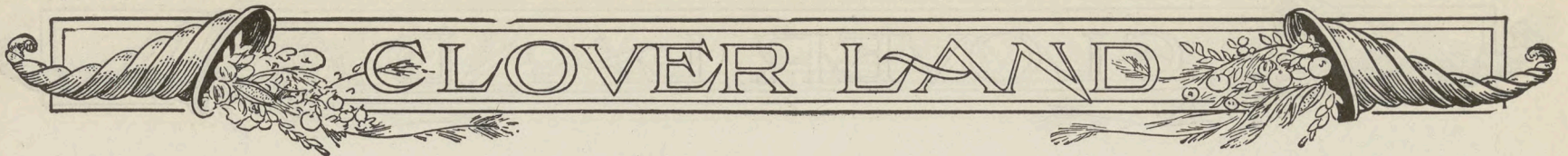
In the manufacture of concrete pipe or tile, only clean, well-graded sand free from loam and vegetable matter



Excavating for, and laying main line of tile trench

or similar foreign materials should be used. All materials including the water should be measured so as to secure uniform proportions. Materials should be combined by using a mixer that will thoroughly mix the materials so that every particle of sand will be coated with cement and thus secure an intimate bond between particles. The concrete should be proportioned

(Continued on Page 48)



Capitalizing Rich Muck Lands After Draining Is Installed

By W. H. OSBORN

THE muck lands of Menominee county, Michigan, where carrying a sufficient amount of mineral matter, as nearly all of them do, are wonderfully fertile and productive when drained.

The United States government, after looking over several states, has selected a tract of 30,000 acres bordering on Green bay just above the city of Menominee, in Menominee county, and is now surveying it preliminary to large drainage and development operations to make homes for the soldier boys. There are many varieties of muck in upper Wisconsin and Michigan, grading all the way from a soil with a good supply of mineral matter to a soil made up almost entirely of vegetable matter, and on further to the deep peat formations that carry almost no mineral elements of plant food.

Mucks are formed on flat surface lands where the accumulation of vegetable matter has impeded the drainage of the water and has piled up to the depth of from six inches to two feet—this holding up of the water prevents the bacteria which causes the decay of all vegetable matter from completing its work. The bacteria of molds and decay must have both moisture and air to perform their functions and vegetable matter that is under water continually does not decay. The muck lands usually lie along streams or draws and are covered with a heavy growth of cedar, elm, ash, etc. These areas are generally narrow but often extended to some distance in length. Such land has a large amount of soluble mineral and often considerable solid mineral washed in and incorporated through the vegetable matter, making when drained, the most fertile, productive and lasting soil to be had.

The underlying soil of these lands is usually the same as the surrounding high lands. The best areas of muck land are over soil of limestone origin, which furnish lime to neutralize the acids formed by the decaying vegetation. Some of the larger areas



U. S. government is now making surveys of 30,000 acres of Menominee county lands for drainage and development work. Picture shows similar land after drainage and cultivation.

of deep muck may require the addition of some potash to produce the best results, but the average tracts have a well balanced soil which improves rapidly with cultivation.

Peat lands are generally formed in areas of considerable extent and nearly always underlaid with sand or soil of sand-stone origin and are usually from two to ten feet in depth. They are nearly always formed by a growth of spragnum moss and are very acid. Large peat areas are generally covered with blue-berries, small ferns, sour grass and occasionally some stunted spruce. These lands even after drainage are seldom profitable for farming. They lack all the elements of plant food, excepting nitrogen of which they are almost entirely composed, but are so acid that even after drainage, bacteria cannot work in them to make the nitrogen available. By draining and liming they may develop into farming lands at some future time.

Muck lands in this district produce with little effort enormous crops of alsike clover, cabbage, celery, cauliflower, onions, potatoes and all kinds of grass and root crops, and where well supplied with mineral matter, enormous crops of all the small grains.

Henry Spencer, of Menominee Mich., last season sold \$700 worth of excellent alsike clover that he raised on seven acres of well drained muck soil at Carney. C. I. Cook, of Menominee, some years ago dug a short ditch to let the water out of a then almost worthless tract of muck land, since which time he has produced phenomenal crops year after year, of celery, cabbage, Spanish onions, cauliflower, etc. Spanish onions sowed in a hot-house and transplanted have produced \$800 per acre, cauliflower has produced \$700 per acre, and other crops at the same rate. Mr. Cook considers his land worth \$1,000 per acre to him, while before drainage it was only a frog pond.

At Nadeau, Mich., the Nadeau brothers drained a tract some years ago, of muck, and have produced with little effort the largest and most profitable crops of hay, grain, potatoes, etc., that has been grown in that part of the county.

A tourist passing over the county in the fall often sees gardens extending from high land on to muck ground, where cabbage, onions, celery, carrots, cauliflower, lettuce, etc., are being grown and where well drained there is always found an enormous growth of perfect vegetables, unsurpassed in quality and flavor by any grown in any country.

This same type of soil and climate, but not so favorably located, has produced from \$1,000 to \$3,000 worth of head lettuce per acre, but here in Menominee county where the grower can ship to markets like Chicago by express in about seven hours' running time has the great advantage of being able to put a better quality vegetable on the market than any that can be grown farther south and have it in better condition than any that has to be sent from longer distances, and no better vegetables can be grown anywhere than on this government reclamation tract lying on the shores of Green bay, the perfect combination of soil, rainfall and climate perfectly regulated by the influences of the great body of water produces this ideal combination.

When these muck lands in Menominee county are thoroughly developed, with their even climate, regular and ample rainfall, they will be a great resource to the county and state, and will produce as much revenue per acre with as little effort as any lands in the United States. They are ideal for the small farmer and truck gardener. A few acres is all that will be required to support the average family. The people of Menominee county are anxiously looking forward to the time when this land will be fully developed and occupied, bringing one more great resource to this county.

Cattle Production and Pasture Go Together

By J. L. TORNEY
in "Shorthorns in America"

LAST summer Prof. J. G. Fuller of the Wisconsin college and I were looking over some big Shorthorn steers on pasture near Mineral Point, Wis., and he remarked: "I would like to see more of this land under cultivation." A short time ago I was at Prof. Fuller's beautiful northern Illinois farm and I remarked: "I would like to see more cattle on these farms."

So it goes. Apparently, we can't have everything. Good cornbelt land fills the heart of the man who loves the golden grain and the full corn cribs. Good pasture land is appreciated by the producer of cattle. Apparently, cattle production and pasture go together; and at this time, land that is better adapted for grazing than for cropping is playing a very important part in maintaining our meat and milk supply. Our future cattle supply is also dependent upon the quality of our permanent pasture.

The time was when the cattle feeder's success was measured by the amount of corn he could feed and not get cattle "off feed." The modern meat and milk producer increases his output by the judicious use of pasture and silage. And speaking of making milk and meat on pasture and silage, do you know of a breed of cattle that turns pasture and silage on the average farm into human food more economically than the Shorthorns? If

you do, be out with it. Apparently the average farmers haven't found the other breeds because most are using Shorthorns.

Men who can make choice steers, at the present time, on grass and pasture are really doing patriotic service. The concentrates must be conserved for human food. Where choice blue grass and good water abound, choice Shorthorn steers are making choice human food; and if some sections of our country are not producing big crops of wheat and corn "we should worry."

The following clipping appeared in a recent issue of The Drovers' Journal: "Griswold Bros, of Livingston, Wis., who are well known as breeders of Shorthorn cattle, Poland-China hogs and Percheron horses, sold on Tuesday's market a car of choice cattle of their own feeding at \$18.35, weighing 1,618 lbs. The load netted nearly \$5,000. This is a record price for Wisconsin cattle."

The operations of the Griswold Bros, have always been interesting to me. The following letter written me by Robert Griswold explains very clearly the methods employed by Griswold Bros. in making Shorthorns pay. Notice the absence of corn in the ration, and how the Shorthorns gained in weight:

"Your letter of the 4th is received. Most of the steers were the correct

type, but a few were plain and a little coarse. The figures we will give you do not show as much gain as our heavy cattle usually make, but the figures are hardly fair to the cattle. They weighed 1,290 lbs, on Sept. 18, 1917, but were weighed after only a mile and a half drive on a grass fill. They cost \$13.10 per cwt.

"They were run on grass until about the first of December when we put them in the yard on mixed hay silage and about a pound daily per head of cottonseed meal. The silage was increased slightly when cold weather set in and the cottonseed meal was increased gradually to about 1½ lbs. daily until near grass when they were given about 2 pounds for a short time. On May 4 they were turned into the pasture, 17 head on 40 acres, and given a light feed of silage and cottonseed meal once daily. Through the winter they got it in two feeds, morning and evening, hay always accessible. On August 31, they were put in a dry lot on timothy hay and a little grain to dry them up for shipment. They were driven six miles to the scale on September 2, weighing 1,630 lbs., with a further shrink of 12 lbs. per head at the Chicago scale on September 3, selling at \$18.35. The expense on the shipment was \$79.70, leav-

ing \$123.20 per head to pay the feed bill with. Previously the drive to the scale in buying has been a little more to our advantage and has shown in the final reckoning. Our younger cattle had a little advantage over these weighing in, many of them after an eleven mile drive, and besides they have actually put on more pounds from all appearances, but have not yet come to the test, but will probably be marketed within the next two weeks. We will be pleased to give you the figures on them also. They were all run in the same feed lot."

"\$123.20 per head to pay the feed bill." Remember, all the feed except the cottonseed meal was grown on the farm. Such is the patriotic service of good men, good grass and good cattle.



CLOVER LAND

The Mills Which Made the "Mackinaw" Famous

By HENRY A. PERRY

IN THE very heart of Cloverland, almost in the geographical center of the thirty million acres of cut-over land in northeastern Minnesota, northern Wisconsin and northern Michigan that are available for sheep grazing, has grown a remarkable industry that depends solely upon wool production for its materials of manufacture. Yet, within the bounds of this vast area of undeveloped wealth there is not enough wool produced to keep this industry running on half time. Millions of acres of land, all affording unexcelled pasturage for sheep, lie idle, and this woolen industry is compelled to import from other districts of the United States and from South America 80 per cent of its raw material to operate the mills and factories to their full capacity the year round.

This remarkable industry, which comprises woolen mills, knitting works, garment factories, and a mammoth wholesale house and general office building to distribute the manufactured products to all parts of the earth, is conducted by F. A. Patrick & Company. Mr. Patrick, president of the company, is the guiding genius who has developed this great institution from an insignificant co-operative affair in a remote section of Minnesota within the short period of only twelve years.

The group of manufacturing plants, wholesale house and general offices is located in Duluth, Minn., at the head of the Great Lakes transportation system, a commercial advantage that will be greatly enhanced with the completion of the lakes-to-ocean canal and subsequent direct trade with all ocean ports of the world. The concern is better known as the "Patrick-Duluth," and around this popular name and brand of manufactured materials clusters a romance of the north woods, for it was Mr. Patrick who put the "mack" in "mackinaw," the top-coat the lumberjacks of the northern forests introduced to the world as an article of general utility.

There is always the tinge of romance connected with the birth and growth of any great industry, each has its own special protege, so the mackinaw coat and "Patrick-Duluth" have become synonymous terms. The history of the mackinaw dates back to the early trading post days of Fort Mackinac, Mich., when three fur companies established a trading post on Mackinac Island, at the entrance to Lake Michigan, and vied with each other for trade. The Indians with whom they traded wore heavy, peculiar, pretty blankets, the handiwork of their squaws. These blankets, because of their distinctly brilliant hues and warmth, became known as "Mackinac blankets," taking the name from "Michilimacinac," the Indian name for turtle, which was given to the island because of its shape, and later became the name of the trading post.

Quickly following the fur traders came the woodsmen. The bright colored "mackinaw blankets" and their exceedingly heavy texture caught the eye of the woodsmen and loggers. "Mackinaw blankets" were bartered for

and cut up into crude top coats. In those days people were looking for "service" in wearing apparel, just as they are today, and the "mackinaw coat," though ill-shaped and clumsily pieced together by the woodsmen, became the coat of service and the popular outer garment among these sturdy pioneers during the long winters of the north.

With the industrial invasion of the forests of the northwest came the lumberjack with his homemade "mackinaw." The supply of Indian blankets became inadequate to keep pace with the demand for coats, and a number of small woolen mills sprung up in different parts of the

northwest whose mission in industrial life was to manufacture "mackinaw" coats, duplicating the hand weave of the Mackinac Indians as nearly as possible. Although they failed to blend

the bright colors and knit the texture with the perfection of the patient squaw, they produced an honest cloth, 100 per cent wool, which obtained great popularity through those who wore it.

One of these small plants was organized and founded at Fosston, Minn., by Norwegian farmers, who operated on a small scale and sold their cloth wherever a market could be found. With the beginning of a jobbing house in Duluth by F. A. Patrick & Com-

pany, the company started a small sewing factory and purchased some of the cloth made by the little woolen mill at Fosston for manufacture into mackinaws. This was where the name Patrick and mackinaw became associated and inseparable. The Patrick mackinaw became the blazing symbol of the woods. The tremendous popularity of the coat soon made it necessary for the Duluth factory to absorb all the product of the Fosston woolen mills. Then the mills were leased, and finally, in 1906, they were purchased and removed to Duluth, where the whole business was reorganized, broadened and elaborated as the Patrick-Duluth Woolen Mills.

Since 1906 the Patrick-Duluth mills and factories have grown by tremendous leaps, until now there are 525 employees in the mechanical departments alone—150 in the woolen mills, 250 in the garment factory, where the favorite mackinaw still is the leader, 125 in the knitting factory, where sweaters and heavy socks are made. Besides these three large manufacturing plants the company added to its equipment the Mankato mills at Mankato, Minn., and has erected the finest wholesale house and general office building in Duluth and one of the largest business establishments in the entire northwest.

All this phenomenal progress has been instituted and accomplished through the untiring efforts and perseverance of Mr. F. A. Patrick, who, with the keen sense of business judgment, has ever kept with him the highest type of employees and assistants, and has had associated with him in the financing and development of this great industrial project some of the best business men of the northwest, men of sound judgment and business acumen.

The constant alertness practiced by the company to grasp every opportunity to broaden trade is well illustrated by the novel manner in which the top-coat of the lumberjack was converted into a popular outer garment for all classes of people. It was noted that the mackinaw became a fad with college boys who had spent a vacation during the winter months in the north, and walked about the campus among the college boys. The result was that a procession of fifty boys followed him back to the store, all demanding coats and even wanting to take the samples. It is unnecessary to say the dealer was convinced and the boys were supplied.

Today the Patrick-Duluth company is doing a national business with its woolen products, having salesmen in

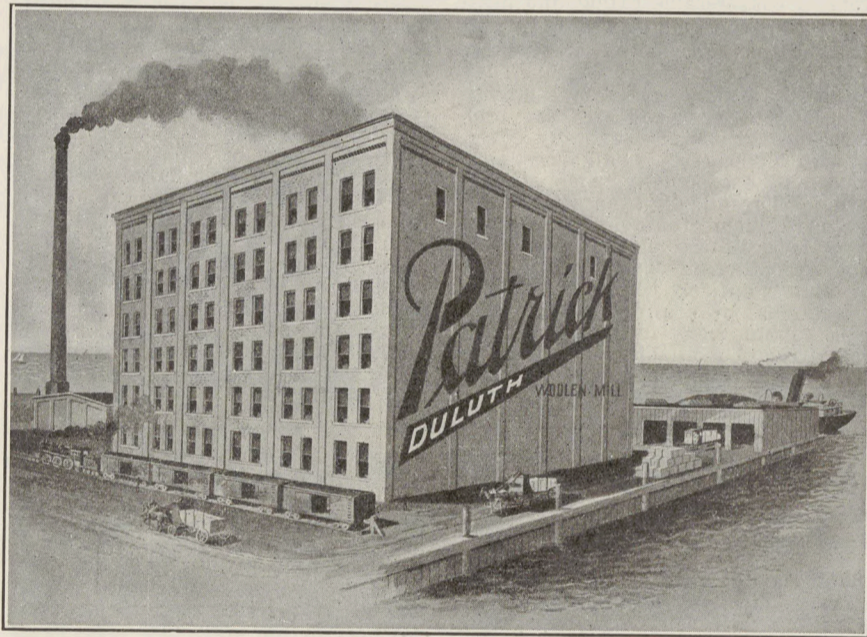
every state in the union and accounts in every large city and most of the small ones. Behind all this remarkable development which is also substantial, are many elements—energy, initiative, perseverance, honesty, 100 per cent wool in their goods, in short, an "all wool and yard wide" policy that obtains in the manufacture and sale of the goods.

Patrick-Duluth buys all the wool possible from local farmers, and is doing a great work to encour-

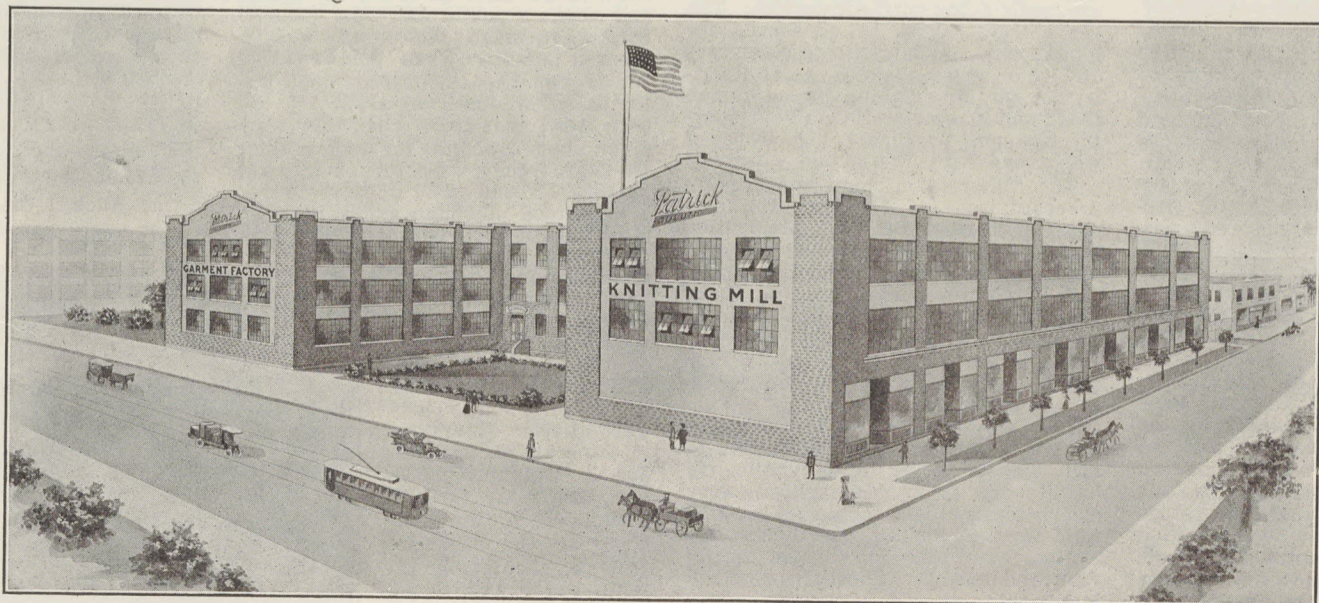
(Continued on Page 50)



F. A. Patrick, President



Here is a top cash market for Cloverland wool, in the heart of a great, natural grazing country



This great Duluth concern now has to import 80 per cent of its raw material, which is wool

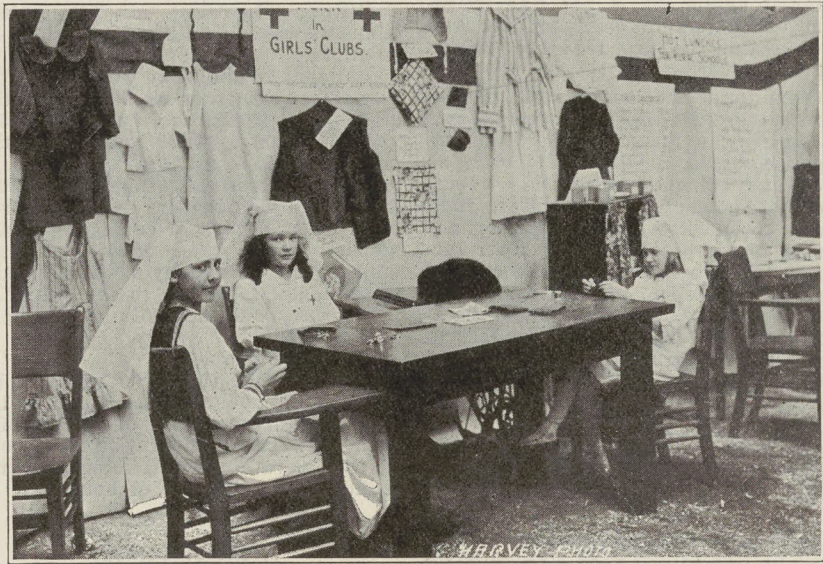
CLOVER LAND

God Bless the Boys and Girls of Cloverland

By BARBARA VAN HEULEN

ARE you familiar with boys' and girls' club work? If you are not you will be interested to know that it is a part of Uncle Sam's plan for developing an interest in agriculture and in the science of home-making among the boys and girls of our towns and rural districts. The club work, the work of the Home Demonstration agent and that of the County Agricultural agent, all are parts of that extensive national program to further a wholesome community life. A few of the ways by which the clubs carry out their part of this plan are related in this article.

Over at Eben, in Alger county, there is a hot school lunch club which has developed its work to a higher degree of completeness than any other club in the state working on this project, at the present writing. Its purpose, as is that of all hot lunch clubs, is to provide those boys and girls who carry their dinners with a hot, appetizing dish at noon. Though the project was very successfully carried out in this school last year, its community-minded superintendent, Y. G. T. Rehner, resolved to carry the work still further this winter. Accordingly he evolved a very unique plan by which the variety of dishes served in the club might be greater, and by which the cost, though already low, might be further reduced. Briefly, this was the plan. A home garden club was organized among the school boys and girls. In addition to the home plots, all the pupils who were members of the Hot Lunch club worked together on a garden, a half acre in size, which was laid out on the school grounds. The Girls' Canning club then canned and dried ninety-eight quarts of peas, beans, sweet corn and other vegetables. In addition to this they stored ten bushels of carrots, eight bushels of beets, and nine bushels of kohlrabi. It seems hardly necessary to add that in addition to the prac-



A Red Cross demonstration and exhibit by girls' club, which attracted much attention at a 1918 food show.

enson, in Menominee county, in District No. 2, not one penny has been invested in cooking apparatus. An oil stove was loaned to the club for the winter by an interested resident of the district who, curiously enough, has no children attending the school. The cooking is done in a pail, and all other small supplies, such as paring knives and tablespoons have been donated by the parents of the children. Each pupil brought his own cup and spoon.

The little cooks, who work in pairs in weekly shifts, plan the lunch dishes for their week with the aid of the teacher. They then assign to the club members the supplies needed for the different days. A simple bookkeeping system is followed, and the cost of the meals for the week, averaging 10 cents per member, is fully met by these contributions. An amusing example of the resourcefulness developed among the children showed here when one of the housekeepers on duty for the week, lacking soap, boiled some wood-ashes, made lye, and with it scrubbed the schoolroom floor so that it fairly shone.

The school at Witbeck, Marquette county, operates its Hut Lunch club on a similar plan. Here one day, the cooks being very desirous of having baked beans for lunch, but having no oven, invented a very ingenious substitute for one. They boiled and seasoned the beans, put them in a baking pan, covered them closely, and smothered them in the ash-box of the furnace. At noon they were piping hot.

At Quincy some of the women living near the school have generously opened their kitchens to the children. There is no obstacle too difficult to overcome where there is a genuine desire for a club of this kind.

It must not be supposed that this is the only winter project for boys and girls. Because of its counter action against the debilitating effects of influenza it has been given especial attention in many places.

One of the most popular projects for upper peninsula girls has been that of garment-making. Five hundred and twenty girls were last year enrolled in these clubs. The value of the garments which they made was \$2,371.70. In addition, several thousand Red Cross articles were made of which no financial estimate was made. A proof of the general interest in garment-making may be taken from Mar-

quette county. Begun two years ago, the membership grew to such proportions that it soon became evident that trained supervision would be needed. Accordingly, when the county board of supervisors was given an opportunity to secure a Home Demonstration agent, School Commissioner S. R. Anderson, with club work in mind, urged her appointment. In six other counties of the peninsula girls' club work is supervised by the Home Demonstration agents.

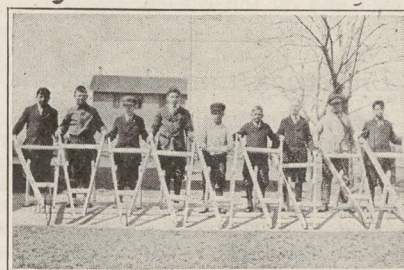
In these clubs the girls learn to draft simple patterns, and to make an infinite modification of these. For example, one pattern serves as the basis for a bungalow apron, night-



The children enjoy hot chocolate with their sandwiches.

gown, kimona, or a one-piece dress. They are taught the values of goods, to remove spots and stains, to dye faded garments, to remodel worn clothes, and the rudiments of house decoration. It is estimated that ninety-one out of every hundred girls marry and make homes. What better training can they be given than that which they would secure from these projects?

The major winter project for boys is handicraft work. With the simplest



These handicraft boys are ready for the garden season.

of tools which may be found on almost any farm, the boys are taught to make handy articles for the house and barn. Among these are wagon jacks, automobile jacks, broom racks, book stands, sheep ricks, potato crates, garden cultivators and other articles too numerous to mention. Over at MacMillan, in Luce county, the high degree of success attained by the boys has inspired them to try making furniture this year. It is safe to forecast, that under the excellent leadership of Mr. Floyd House the boys will have a notable exhibit in the spring.

The Quinnesec Handicraft club, directed by J. D. Martin, drew the attention of all the upper and lower peninsula boys when their demonstrating team was given first place at the Detroit State fair in September. Their combination of even team work, speed in assembling the garden cultivator, and the smoothness of the lecture, won for them a splendid kit of tools.

Lack of space prevents the mention of many clubs which did most excellent work last year. Stories of the achievements of the boys' stock and crop clubs and of the girls' canning clubs will have to be left to subsequent articles.

Does club work pay?

Last year, eighty out of eighty-three counties had clubs. The average production per member, based on those who finished their projects, was \$21.89. The average cost of supervision, counting all funds expended by school boards, counties, the state, and government was 74 cents.

But the outstanding reasons why club work must go on are these:

Through working together on a project in which they have a common interest, the boys and girls develop a spirit of co-operation without which no neighborhood can reach its highest development.

Working and studying of some problem on which the parents are engaged on a larger scale, whether it be making a kitchen apron or raising a half acre of potatoes, develops in these children a sense of home responsibility and an appreciation of home affairs.

From every point of view then, club work, because it strengthens our homes and our communities by building on the rising generations, must continue as a part of our nation's program. That is the vision of the junior extension department of the Michigan Agricultural college.

Fifty-five Years Old

ON January 22 the First National Bank of Marquette, Mich., celebrated its fifty-fifth anniversary, and, incidentally rounded out its most successful and prosperous year, although handicapped in many ways by the war. In April, 1917, its resources were \$2,999,000, and at the time of the last call, December 31, 1918, its resources were \$3,259,000, a fine growth that was enjoyed despite the fact that through the bank there were subscriptions to the four Liberty Loans aggregating \$1,317,650, representing 7,453 subscribers.

In addition the bank materially helped with the government financing by purchasing on its own account at various times certificates of indebtedness aggregating \$1,450,000 and war savings stamps to the amount of \$7,500, making a total of \$2,775,150 subscribed to Liberty Loans, certificates of indebtedness and war savings stamps.

In December, 1901, the bank was designated a depository of the United

(Continued on Page 34)



Each garment-making club holds an exhibit in the spring.

tical cookery the girls are learning, they are teaching lessons in thrift which are worthy of emulation in any home.

Sixty students of the Newberry schools interested in hot lunches organized a club January 14. They will begin work as soon as the rooms can be fitted up for their use. The school board plans to aid the club financially to the extent of equipping a kitchenette, and supplying three new craftsman tables. The service will be on the cafeteria plan. The domestic science teacher and the county nurse will supervise the club.

You must not infer from the foregoing paragraph that expensive equipment and trained supervision are necessary. Interest and good will spell success for these clubs. Near Steph-

COVERLAND MAGAZINE

MENOMINEE, MICHIGAN

The Illustrated Monthly Magazine of Cloverland.

ROGER M. ANDREWS.....President and Publisher
P. C. MUNROE.....Vice President and Business Manager
CHARLES R. HUTCHESON.....Vice President and Editor
HENRY A. PERRY.....Assistant to the President
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FEBRUARY, 1919

CHARLES R. HUTCHESON, Editor of Cloverland Magazine, is now on a three months' western trip, inviting grazers to come to Cloverland. These editorials were written in Denver, Col., and Salt Lake City, Utah.

Making Farms and Ranches

For thirty years the people of Cloverland have seen mighty forests turned into great, productive farms. Laborers, working in the mines, woods, and factories, and farmers from other communities, have bought a forty or more, and built a house and barn on it. They cultivated the land between the stumps, and it was productive. They brushed and cleared the land, and fenced their property. Yes, they made farms. There are today over 75,000 farmers on the former timber lands of northern Minnesota, Wisconsin and Michigan. Some of these farmers are very prosperous; all are making a good living and paying for their farms. Their biggest profit will be realized from the increased value of their lands.

We have millions of acres of these fertile cut-over lands that have not, as yet, been taken up by farmers, but some day they will be. Rather than wait for the smaller settlers, the land owners are willing to sell or lease these cut-over lands in large tracts to sheep and cattle men, at very reasonable prices, and on good terms.

The land that is ideal for bumper crops for the farm will be ideal for the ranch or stockman. There is summer feed growing in abundance wherever the land has been burnt over or brushed. These lands must be made into ranches. The sun must get to the soil to produce sheep and cattle feed. As farms are made on a small scale, ranches will be made on a larger one.

Burning the brush and slashings is the quickest and cheapest way to make good pastures. Care must be taken during the burning, however. Arrangements should be made with the fire wardens. They can give instructions and helpful advice. Brushing is slower, and costs more than burning. Then follow by seeding blue grass, white, alsike and red clovers. Blue grass will, in turn, form a perfect sod, and is second to no other grass that ever grew, for putting on the hard flesh. Experiments have shown that Cloverland pastures, when free from brush and set in a solid sod of grass, will carry four sheep to the acre, and one cow or steer to every one and a half or two acres. Sheep eat a greater variety of brouse than cattle and they will also do better on shorter grasses. So much for summer feed.

Winter feed must be produced on your own ranch, if you would get your feed at the lowest possible cost. Land must be cleared. If you start in when you have an old hardwood cutting it will not cost much to put it in condition for the plow. The first year's crop will, as a rule, pay for the cost of clearing, which differs on the various tracts. Pick out the land that is easiest to clear first. Then, after the sheep and cattle have grazed a few years where you have burned over or brushed the land, any part of your tract can be cleared profitably. Once the land is cleared you do not have to clear it again. It is not like irrigation which has to be done over and over again. Nature does the irrigating in Cloverland.

Cloverland has every real, permanent advantage that the west boasts of, and lacks many of the disadvantages common in the west, such as drought, storms, poisonous weeds, lack of good drinking water, long hauls to markets, etc. We are not trying to compete with any other section. We are merely endeavoring to attract stockmen and farmers, who are at present operating under uncertain climatic and food conditions, to grasp the opportunity that is theirs in Cloverland.

Cloverland's Editor in the West

Last year when the writer came west he had to beg people to listen to his story of Cloverland possibilities. This year he finds stockmen everywhere anxious to know just how they can get a ranch in Cloverland, that wonderful grass and hay country at the very door of the world's greatest livestock markets.

Many of the very best stockmen in the west visited Cloverland last summer and found it better than it had been represented to them. They found there western stockmen with sheep and cattle which they had shipped from the drought-stricken sections, the greater percentage of which stock would have died if the owners had not shipped it to Cloverland. The visitors found this stock gaining in flesh, and that the losses had been cut down to the minimum since they had been unloaded in Cloverland. This same stock was shipped to the Chicago market last fall in splendid condition, and brought prices that could never have been realized had they not been shipped to Cloverland.

Western sheep and cattle in 1918 made good our claims with the westerners. Now they are sure that the country is all right.

We are not trying to take people away from a country with which they are satisfied. We are merely offering the opportunities of Cloverland to those who need a dependable, permanent range where they are sure to prosper.

The Cloverland Magazine can help you to get located on the best possible tract for farming or grazing in the cut-over sections. We want you to feel free to write for suggestions and advice. Call and see us at Menominee, Michigan. Our office is located right in the center of this great land of opportunity.

Cloverland Magazine has no land to sell and is not directly or indirectly interested in any special land, nor does it or any of its staff accept any commission whatever from owner or new settler.

We are doing a public work, on the level and on the square.

Livestock and Cloverland

Here in this vast, once timbered domain, where millions have been made from nature's unequalled growth of hardwood, pine and other soft woods of great value, we are at the dawn of a new era. This new undertaking of man in Cloverland, where nature has provided an abundance of feed, is destined to make this one of America's best livestock producing sections, and

Four-Leaf Clovers—By Leo Patrick Cook

"Sometimes the Mother Went to a Show"

Continuing our reading last night, we find that Anton Abear of Menominee was arrested because he did not send his daughter, one of seven children, to school. His defense was that because food is so high and his income so restricted he has been unable to dress the girl properly.

Without knowing anything more about it we'll be willing to bet that he is right.

But that is not what we intended to say. The witnesses on the part of the people, testifying as to the character of the parents, swore "sometimes the mother went to a show."

This is a terrible arraignment. Just think of a woman with seven children with all the work of caring for them, getting ready their food, scrimping and saving and denying herself and then neglecting them to the extent of going out for an hour of an evening to see a movie!

It's unbelievable.

And another thing we will not believe if anyone tells us—Some of the neighbors come over on an evening and say: "Mrs. Abear, you trot along to the show and we'll look after the children for a couple of hours."

* * *

A Bit of Comedy

(Us in the Houghton Mining Gazette.)
County Agriculturist Geismar has been testing some seeds for a client. His method is to place them between pieces of water soaked blotting paper. If they germinate in this medium they are good seeds. Some of them have

to develop a great permanent industry.

For many years farmers in this section have been very successful with livestock raising, along with hay, small grain and vegetable production, yet most of these men depended upon an income from work which they did in the woods. Now that income is being replaced by one from their own farms. Potatoes, peas, hay, and dairy produce have been bringing him a very satisfactory cash income. He has been expanding each year, and each acre added to his clearing means more cash and profit. The county agents of Cloverland have done a great deal, in the last few years, toward turning our farmers' attention to livestock farming, and to the value of good pure-bred sires.

The old saying, "necessity is the mother of invention," is true in the case of the Great Lakes cut-over section. Not only are the farmers looking more to livestock raising, but so also are all those interested in Cloverland's prosperity and future development.

Not until the last few years did the majority of our people realize that Cloverland was qualified with every essential for a wonderful livestock country. When a few westerners came to visit this section they saw at once that here is the last big field for the stockman who carries on extensive operations.

The "brains of Cloverland," we might say, are studying the livestock industry. These same brains developed the world's greatest lumber and mining industries. They are backed by millions of dollars which were made right here in Cloverland. Now they turn to the world's greatest industry—agriculture. The foundation of all permanent agriculture is livestock.

Cloverland has been found to be equipped by nature with an ideal climate, pasturage, winter feed and locations for the world's best markets, and it is destined to become one of the greatest livestock sections in America. Yes, the climate is almost ideal. "But," says the westerner, "on account of your snowfall we will have to winter feed." Sure you will, and nature intended to give the soil, the plants, and the livestock a rest, a

failed to germinate and for no apparent reason.

Prof. Geismar mentioned the matter to John G. Stone, secretary of the bureau and authority on seeds, chickens and other agricultural specialties.

"I guess all the farmers will have trouble germinating their seeds next spring," said Mr. Stone.

"Why?" asked the professor.

"Well, most authorities agree that next spring there will be very little German nation left."

* * *

Here's Where We Get a Pair of Gloves

The Connolly Manufacturing company at the Soo is going to manufacture gloves, made from leather manufactured by the Northwestern Leather company at the Soo. Here we have a new Cloverland industry, something that we like to encourage. (We are the only writer in the U. P. who never uses the word "boost.")

The trouble we have found in Cloverland is that the average Blossom (in which we coin a nickname for residents of the upper peninsula or State of Superior) never wants to use stuff made at home. That's why the Michels overall factory went out of business in Hancock, we opine.

Here we have a factory turning out stuff from raw material made right on the premises, Cloverland gloves made from Cloverland leather tanned by Cloverland hemlock bark. That's the kind of industrial promotion we like to encourage.

Ordinarily manufacturing is not done that way else there would be

(Continued on Page 30)

change and new life which comes through the change of seasons. The snowfall is one of our greatest assets, as it protects the roots of the legumes, and supplies moisture.

An abundance of pure, healthful drinking water is one of the first necessities for successful livestock raising. Cloverland's spring creeks, rivers and lakes, located on almost every section of land, assure a plentiful, convenient supply.

"Cloverland is the best grass country I have ever seen," is the remark made by practically every stockman who visits this cut-over country, and some of the best known and most practical men of this great industry have visited us during the last two years.

We have eight months grazing, on ever-green pastures, and an abundance of the best clover hay to feed during the remaining four months.

The greatest markets are within one night's ride—an advantage no other grazing country has.

The livestock industry will, without a doubt, expand more in Cloverland in the years to come, than in any other section in America.

Plans are completed now for westerners to ship in early this spring an increase of 500 per cent over that of last year—some increase. These figures may be doubled before July 1st comes. Cloverland is making livestock history very fast.

Questions and Answers

Cloverland Magazine desires to be of the greatest possible assistance to its readers, and we want them to feel free to write to us about crop production, livestock raising, soil problems, etc. We do not profess to know it all, but we are in touch with those who are best informed about every community. We want our pages to tell facts about everything. We want to print your ideas if they will help others. We want you to tell us your experiences. Tell us, if you can, how Cloverland Magazine can better serve you as its reader. Let Cloverland Magazine be the melting pot of good, practical ideas and helpful suggestions.

CLOVER LAND

Proposed Great Lakes-St. Lawrence-Tidewater Route Is Necessity

By HON. CHARLES P. CRAIG of Duluth

THE vision of a natural waterway penetrating to the heart of the continent, passing in its course the greatest manufacturing districts and coal fields in the United States, coming through the locks at Sault Ste. Marie, and ending at Duluth, up against a country with a capacity for producing ores, cereals, livestock and dairy products unrivalled in the world, is not new; but the American and Canadian governments, notwithstanding one hundred years of peace, have not heretofore acquired that unity of action necessary to bring that vision to realization.

The extent to which these rich vast sections are to serve the world in ores, grain, butter, meats, livestock and manufactures, cannot be over-estimated by the most optimistic. It staggers the imagination.

The promise of the future rests largely upon this Great Lakes region and the prosperity of that region

To Hon. C. P. Craig, of Duluth, has been entrusted the piloting of the lakes-to-ocean deep water canal via the Welland canal and the St. Lawrence river to tide water. Because of his broad experience, his splendid knowledge of the intricacies involved in great commercial and industrial enterprises, his quick grasp of the importance of minor details that are vital to the success of all great undertakings, his ability as an organizer of the necessary forces to carry a big project through to a successful conclusion, his personal forceful energy, his high rating of character, and his ability to accomplish big results, he was the logical man to place at the head of such a great and important task.

The following article by Mr. Craig

shows how carefully he has gone into every detail of the lakes-to-ocean project, and he has figured out in dollars and cents the enormous saving this lakes-to-ocean waterway will mean to every business and every industry adjacent to the Great Lakes and in that vast region west of the Mississippi river and along the Canadian boundary line, which constitutes the great wheat belt and granary of the world. This article is a revelation to practically every business man whose interests directly or indirectly depend upon the development of the affected territory constituting nearly one-half of the United States, and ought to be an inspiration to every man, woman and child to aid Mr. Craig in bringing this ponderous project to early completion.

state through the New York barge canal. I know that Pennsylvania, being a railroad controlled state, will likely

miles to Port Weller, on Lake Ontario. This canal is being for the present constructed to a depth of 25 feet only,

sary? First: Create a public demand for the undertaking in both countries by the simple process of pointing out its economic value. Second: The two countries must co-operate fully both contractually and financially. Third: Prepare a reference of the entire subject to the international joint commission.

Fortunately, it has already been ascertained that this commission, composed of citizens and subjects of both countries created under the treaty of 1909 between Canada and the United States, is authorized under Article 9 of the treaty to do all things necessary in the premises. In a very recent letter, Hon. James A. Tawney, a member of the commission, states:

"I have reason to believe, now that the war is over, that both Canada and the United States will interest themselves more earnestly and actively in this project than



The great inland harbor of Duluth, and splendid view of this rapidly growing city.

largely upon Great Lakes navigation. Its full fruition rests upon its products reaching the markets of the world expeditiously and at minimum cost. Where on the face of the globe lies there a hinter land so rich in natural resources, climate, and producing capacity, which, though lying in mid-continent, may yet, if it will, load her riches at her wharves and send them to every market in the world without breaking bulk?

Shall this vision become a reality? We meet those who say it cannot. May I be permitted to venture the statement that it will. When, will depend upon the intelligence, the earnestness and the sustained effort with which our public-spirited men attack the problem.

I know that New York is zealous to have all freight break bulk on her docks and be transhipped from New York City. I know that New York state desires all traffic to pass intra-

follow the lead of the railroads and oppose it. I know that when the subject was before Congress at an earlier date, a United States senator said: "It is undesirable to develop transportation highways through alien countries." I know that Canada replied to these sentiments: "That the St. Lawrence is our waterway—when we get ready to improve it we will do so." But I do not believe the man making such a statement in the United States senate today would receive a respectful hearing, nor do I believe the government at Ottawa would make such rejoinder.

What are the physical obstacles to overcome? In a word: The completion of the Welland canal and enlarged canalization of the St. Lawrence river from Montreal to Lake Ontario.

The Canadian government has now well along the construction of the Welland canal, extending from Port Colborne on Lake Erie, a distance of 25

a depth greater than our largest Soo lock, but the sills of the seven locks on its route are laid 30 feet deep and designed to receive ocean vessels of that draft and 800 feet in length whenever the canals on the St. Lawrence shall have been enlarged to admit them.

The present head of ocean navigation on the St. Lawrence is Montreal. From Montreal to Lake Ontario, a distance of 140 miles, there must be overcome by locks 242 feet of elevation. This compared to 325 feet already overcome by seven locks in the 25 miles length of the Welland canal. The St. Lawrence is now navigable from Montreal to Lake Ontario by means of canals and locks of a depth of 14 feet and limited length vessels. In the light of projects we are now accomplishing, this would be a small undertaking financially and presents no major engineering problems.

What are the diplomatic steps neces-

ever before. If they do, and submit to the commission a reference, the commission will be very glad to proceed without delay with the work of making investigation and examinations necessary for a full and complete report to the governments upon all questions involved."

This means that we have the international machinery already created with full powers and willing to proceed, without appropriation, further legislation or act, except a formal reference of the subject to it.

The acting engineer in charge of the Welland ship canal, in reply to my inquiry concerning progress of the work, and asking an expression from him as to the probability of the greater development on the St. Lawrence, closes with this sentence:

"I think there is no doubt, in the

(Continued on Page 56)

CLOVER LAND

The Hume Rural Credit System of Golden-Rule Colonization

By JOHN P. HUME of Milwaukee

THE concensus of opinion as expressed by the federal and state authorities, predicts disturbed conditions throughout the country after the war unless provision is made to absorb the returning soldier and the industrial worker by creating new fields of endeavor and opportunity.

A "Back to the Land" movement has been started by Secretary of the Interior, Hon. Franklin K. Lane, and the several states, through their state officials and civic organizations, are earnestly supporting the movement.

The Milwaukee Association of Commerce is especially active in this direction and has created for the purpose of promoting Milwaukee's interest in the undertaking, a special corps of workers known as the State Development and Agricultural Division.

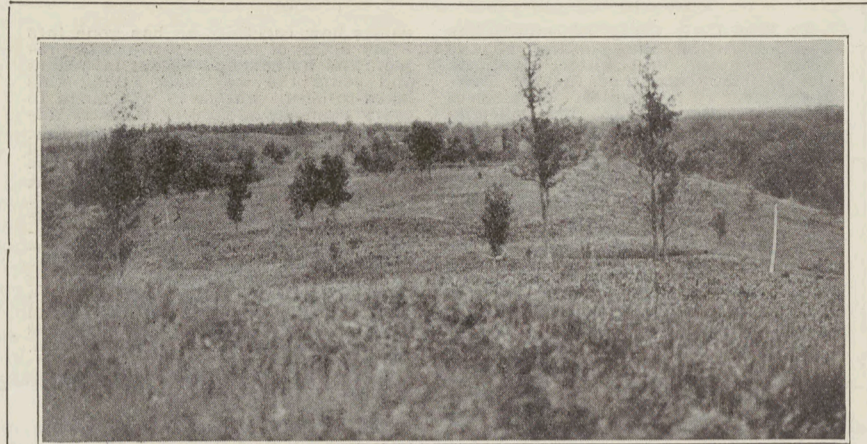
In conjunction with the governor of Wisconsin, Emanuel L. Philipp, a Commission on Land Settlement is being created in response to a resolution passed at a State Conference held at Eau Claire, Wisconsin, September 24, 1918.

The problem of reconstruction after the world war is attracting the attention of the best thought of the country. The returning soldier and the industrial worker must be provided for, and preparation for any and every contingency that may arise must be carefully thought out in advance.

The surplus labor released after the Civil War was largely absorbed by a return to the land. Thousands of acres of farm land in the Middle West, as well as a vast area beyond the Mississippi, was government owned and free to those who wished to avail themselves of it. Thousands of the returning soldiers did so.

The day of free land has passed. Government land, excepting the arid lands of the West, practically speaking, have passed into private ownership. The arid land means dry farming or irrigation, and both mean a constant fight with nature. There still remains the cutover lands of Wisconsin, Michigan, and Minnesota, approximately 40,000,000 acres, and similar lands in the Southern states.

In any discussion of the land question, the importance of the "Back to the Land" movement should not be underestimated even though reconstructive conditions did not demand it. For the past 20 to 30 years, our industrial activities have been such as to attract to the industrial centers the major portion of our young men, and as a result, the farm population has gradually decreased from 65 per cent of our total population to 20 per cent. This in itself presents a danger that attracted universal attention of political economists, who generally speaking, have ever recognized that "The



Northern Wisconsin is in the heart of Cloverland

Tree of Prosperity has its roots in Agriculture, and if the roots decay the Tree dies." Agricultural decay has been going on for a number of years. Efforts to stimulate agriculture by better and improved methods, have been and are still being pursued by every agricultural college, both federal and state, as well as expert tillers of the soil, and yet in the face of all effort prices of food have been continually on the increase, as have all other products of the soil, affecting in turn every industry that depends upon labor.

The natural tendency of our government officials, who are seeking a solution of conditions that will confront the country with the return of the soldiers from overseas, is to look upon the government owned lands as the principal means to the end sought. These lands being owned by the government can be turned over to the soldiers without charge, and government aid extended to make the lands tillable and productive. Houses, barns, stock and machinery are to be supplied, and the soldier farmer maintained until he becomes self-supporting. In most cases outlay by the government will be necessary to provide water and market facilities.

The lands in private ownership, conceded, as they are, to be much superior in every way and more accessible, are looked upon with less favor for the reason that they cannot be acquired by the government without an initial expense, which in itself would mean an outlay of millions of dollars, with additional millions for development.

The spirit which prompts the gift of the land to the returning soldier will be acclaimed by all of our liberty-loving citizens. This endorsement of gov-

ernment action, however, will be based largely upon the theory that something is really being given and that the policy pursued is but a repetition of the policy inaugurated after the Civil war.

This policy is correct only in theory. It is not true from the practical point of view, and in reality works an injury where it seeks to extend a benefit.

Conditions in 1865 and conditions in 1918 must be analyzed and appreciated, if constructive work as applied to land settlement is to be intelligently handled.

The first analysis must of necessity be devoted to land values, and land value when speaking of raw land, as it is recognized today, does not exist in fact. That is to say, the lands available for agriculture at the present time have no intrinsic value, though in some instances they possess a potential value.

The arid lands available either through dry farming or irrigation have neither intrinsic nor potential value, and should be the last resort of our government to supply agricultural needs.

Land in its undeveloped state is nothing more or less than raw material and does not take on intrinsic value until labor is applied. The land when improved to a state of production acquires a value based upon its productive worth. That value is measured by what it will sell for in the open market. If it will not sell for a price sufficient to cover the cost of the labor spent in making a farm, the land in its original state was worthless and a burden instead of a benefit to whosoever acquired it, be he citizen, soldier, or industrial worker. This condition prevailed following the

Civil war and into the later seventies. All information thus far submitted by government representatives infer that the labor involved in producing a farm on most of the government land would mean that the farm would be produced at a loss, which loss would have to be sustained either by the settler or the government. The position taken by the government authorities is therefore untenable in either that the soldier or the government should lose.

Measured by the same standard, the cut over lands of Wisconsin, Michigan, and Minnesota, lack in intrinsic value but possess a potential value dependent upon the agricultural development and producing worth of the land in the various communities in which the land is located. The potential value varies from a mere trifle to \$35 per acre and is controlled largely by local conditions. The potential value is subject to continuous change with a constant tendency to increase, yet invariably maintaining a fair and reasonable ratio between the cutover and the improved. That ratio of difference is always mindful of the labor involved in producing a farm from the raw land, the cost of labor as compared with similar labor in other markets, and a reasonable profit for services rendered. That profit is the difference between the selling value when improved and the potential value plus the labor necessary to create the farm.

The conclusion is evident, that the cut-over lands offer a degree of certainty that arid lands by no species of reasoning can supply.

The one factor that defeats the utilization of the cutover lands as against any other proposition, is the lack of intelligent, simple, constructive policy under which the lands can be marketed and provision made for the necessary machinery to finance the settler and insure him against failure, if he is willing to contribute his labor to his own success. Any policy that contemplates a gift or gratuity, that seeks to reward without compensation, is not only dangerous to the very morale of those whom it seeks to benefit, but defeats the very purpose that is contemplated, viz.: An outlet or surplus labor and agricultural development.

"The Milwaukee Idea" is being advanced by the State Development and Agricultural Division of the Association of Commerce. It has been incorporated in a recent report to the Association of Commerce, and endorsed by the board of directors with the recommendation that it be financially supported by individual members, as well as business men elsewhere throughout Wisconsin and the United States, as it seems to best meet the problem of land control and development. "The Milwaukee Idea" is based upon the Hume Rural Credit system. This system is the result of years of study



The hay crop of Greater Cloverland is twice as large as the hay crop of Wyoming and three times as large as the Texas hay crop.

CLOVER LAND

and experiments by John P. Hume, chairman of the committee on colonization of the State Development and Agricultural Division, and is created categorically under the following heads:

- 1.—Land Ownership.
- 2.—Good Roads.
- 3.—Educational Facilities.
- 4.—Soldier and Industrial Settlers.
- 5.—Financial Aid.
- 6.—Government Co-operation.

The Agricultural and State Development Division of the Association of Commerce, after diligent study and mindful of a situation that must be met in a broad and intelligent manner, recognizes as fundamentally sound any plan of colonization that embraces the following cardinal principles:

- 1st. Submission of its colonization plan to federal, state, or (temporarily) association supervision.
- 2nd. Offer the settler undeveloped lands without principal or interest payments for a period of five years at option of the settler.
- 3rd. Supervision of settler, and the problems that confront him, by recognized state or federal agents.
- 4th. Extension of financial aid to the settlers in so far as their immediate needs may require, and the finances of the colonization companies will permit.

Land ownership in Wisconsin is private ownership, and there appears to be no good reason why it should not remain so. Fifty per cent of all Wisconsin cutover land is now owned by individuals whose holdings do not exceed 640 acres. Of the remaining fifty per cent, one-half is reasonably compact and would respond to active colonization work. The other half is scattered and requires blocking or assembling to meet effective settlement. It appears reasonably conservative to state that seventy-five per cent of the cutover lands of Wisconsin require blocking, and this should be done by companies such as contemplated by the Association Committee. Some of these lands would be purchased outright but the major portion would naturally become identified with organized effort as the quickest and most direct method of meeting the necessities of the owners. Individual effort to colonize small acreage is not only difficult but expensive, therefore, the concentration of the different units in a holding company appears to be the only practical solution.

Good roads are as essential to successful colonization as good lands or good roads should be built in advance of the settler.

Schools accessible to the children of the farmers should be provided with as little delay as possible, or means of conveyance to a central school arranged. The matter of education is uppermost in the minds of most settlers, and without educational facilities for his children the settler is bound to be discontented.

The prospective settler, whether he be a returning soldier, an industrial worker or an ordinary laborer, is in

the final analysis just an individual citizen, and must be viewed from that standpoint. If history repeats itself, and it usually does, those who have sufficient capital will buy partially improved lands, while those of limited means will turn to cutover lands. Investigation thus far pursued indicates that 80 per cent of those who can be interested in cutover lands have less than \$300, and it is this class of settler, who are forced by conditions upon the raw land, that is the biggest problem.

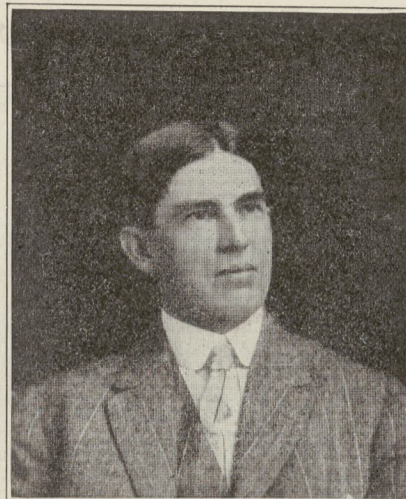
The individual who will undertake the work of building a farm from raw land is an unknown quantity and with very limited capital. His success or failure must of necessity depend upon himself, and every opportunity should be given him. His labor is his principal asset and it is this labor put upon the land that produces the farm. The labor should be capitalized to the fullest capacity that conditions will permit. As a fundamental basis the land should be provided, and principal and interest payments deferred until such time as the necessities of the settler will permit payment without retarding development. The price of the land must of necessity be fair as compared with values of other land in the immediate district, to retain the interest of the settler, as under no payment plan the prospective settler has full opportunity to investigate, and excessive prices invite abandonment.

Government co-operation from a federal point of view, should be free from any entanglements, of a paternal nature, and should merely extend, through the proper agencies, a helping hand along already established lines.

1st. It should avoid the purchase of land for settlement purposes for the reason it would be expensive and appears unnecessary.

2nd. It should modify the present Federal Farm Land Act so as to include within its scope the loaning of money on land under process of development, on the same terms, conditions, and exemptions from taxation that now prevail under the Farm Land Banks. This should cover not only all colonization companies but sheep and cattle companies. The amortization plan should be waived and a gradual increase of the loan as the development of the land proceeds should be substituted. The loans so made should go beyond the settler to the company or individual who in turn is financing the settler. This departure would enable the company to extend additional financial aid to the settler during the construction period of his work, and at the same time provide an added security for the loan.

3rd. Instead of dealing directly with the settler, who too often is uncertain and not dependable, it should deal with some agency that could be held to strict accountability. Government methods, drawing their existence from legal enactment are not elastic, and are apt to be too drastic. Leniency in the fulfillment of written contract has no fixed rule of action, and



John P. Hume of Milwaukee

its abuse is as dangerous to the welfare of the settler as the drastic methods sometimes employed by creditors.

4th. The co-operation of the federal, state, county and town governments is of the utmost importance, but it should be collective and not individual. These forces for good in colonization work should be welded together for good roads, schools, community center work, equitable taxation units, soil surveys, county agents as actual helpmates and instructors to settlers, markets, experiment farm plots at every school, manual training, etc. This work in itself is a stupendous undertaking. It is an asset to every community and in the aggregate to the state and the county as a whole. It is worth more to each settler upon the land than the gift of the land itself was when good government land was available. It is the one thing that no colonization company can successfully undertake regardless of its resources.

The Hume Rural Credit Plan embraces the several features in the foregoing discussion, and as solution contemplates:

1st. Land holding companies to assemble all available cutover lands either by purchase or absorption through exchanging its preferred stock for the land found acceptable. These holding companies should be organized under special enactment of either the state or federal government, the latter preferred.

2nd. To encourage the public to invest in these companies as a quasi-public institution, designed to develop the industrial interests by stimulating agriculture.

3rd. To discourage all private investment in land itself for purely speculative purposes, as a menace to the general welfare, unless some policy of colonization or development is contemplated.

4th. To secure for immediate settlement by land holding companies large bodies of lands from which soldiers or industrial workers can make selection and secure option to pur-

chase, with the assurance that no payment of either principal or interest will be demanded for five years, but in lieu of principal and interest payments certain development must be made each year. This development should not be more than what an ordinary farm boy would do, working in an ordinary way, during six months of each year, and what any ordinary man desiring a home would do of his own volition.

5th. Provide at federal, state and county expense, county agricultural agents with sufficient assistants whose duties should embrace instruction to settlers as to how to meet difficulties that may confront them as to clearing, building, stock, crops, marketing, etc.

6th. Compulsory construction of highways of different types on applications of two-thirds of the abutting property owners affected, the cost to be distributed among the state, county, town units with a reasonable charge to all lands immediately affected by the proposed highway.

7th. Federal and state recognition of all holding companies of certain fixed capital which submit to either federal or state direction. Such recognition is to embrace, among other prerogatives, the same privileges (under proper restrictions) as now granted to other creditors of Land Banks, that the securities created by the settler may be recognized and placed on a par with farm mortgages.

8.—That the various departments of the federal state governments be authorized and instructed to use their several departments, bureaus and field forces to encourage farm settlement through recognized land holding companies.

9.—That the present system of assessment of land values by local officers be abolished and placed under authority of state tax commission, or corrective measures enacted to enforce under penalty more careful inspection of the relative value of assessment units.

10.—That if the present laws are not sufficiently drastic, new laws be enacted to insure schools within easy reach of the settlers' children, or means provided to convey children to some educational institution.

11.—Increased appropriations to the Agricultural Experiment college, the director of immigration, and for additional experimental farms. The experimental work should be extended to and made a part of every rural school, together with manual training as it applies to farming.

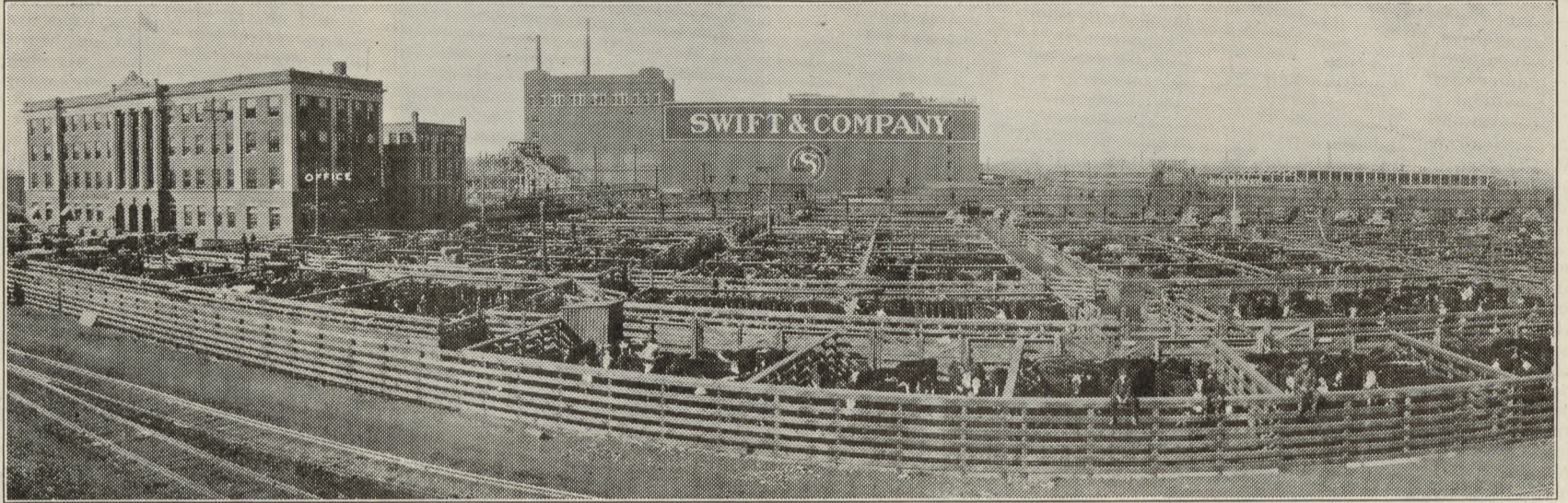
12.—The plan herein provided advocates a broad and liberal support by both federal and state governments. The financial support necessary to its success would run into thousands of dollars, but every line of agricultural industry could be furthered, from the settler seeking for 40 acres to the cattlemen and sheep men who seek larger fields of operation, and each branch of the agricultural industry would be helpful to all others.



The greatest land-clearing organization in the world helping to solve the cut-over land problem.

CLOVER LAND

The 1919 "Victory" Live Stock Show at Denver



THEY called the 13th annual exhibition of the Western Stock Show association, the "Victory Stock Show." It surely was all that one could expect. Every department of the western farmers' live stock interests was well and creditably represented. Also, the great mass of people in attendance was an inspiration to the visitor. Stockmen and their wives were there from every western state, and many from the middle west. It was Mr. A. E. McGregor of Washington, Kas., who paid the new record price for feeders—\$20.25 per hundred. He later broke that record by paying \$20.75 for a carload of yearling feeding steers.

The show this year was, without a doubt, the best and biggest ever held by this association. Pure bred beef cattle showed a big increase, and there was likewise a very big increase, in the dairy department. The greatest increase, however, was found in the hog department. Total entries of breeding swine numbered 533 and there were 46 carloads of fat hogs—a world's record show.

The quality of the stock was par excellence. One could not ask for a better exhibit of feeder cattle. They were uniform, well bred and in good flesh. It would take a visitor two days to go over the different carloads of feeding and breeding cattle if he desired to study them carefully.

The stockmen of Colorado and nearby states, donated 1,030 heifer calves to be sold for the benefit of the Red Cross. The stockmen from El Paso county contributed 121 heifers. Most of these animals were pure bred and they were sold in carload lots. Many farmers took advantage of this opportunity to get started in the breeding of the very best beef cattle. The total of the sales amounted to \$43,843, all of which went to the Red Cross treasurer. John A. Cook, of Sterling, Colo., paid \$110 a head for a carload of the Red Cross heifer calves. The thirty-three carloads of calves sold for an average of \$15.50 per hundred weight, while up at the stadium ranchmen paid as high as \$3500.00 for a pure bred bull. The stockmen are looking for the best, regardless of price.

At the night program, or the big horse show, every seat was taken. The prize winning cattle were paraded with Wyoming, the 1918 Champion Hereford bull as leader. Then followed a succession of blue blooded horses from all sections of the country. The Swift Packing company's famous show horses were there, win-

By CHARLES R. HUTCHESON

ning honors for their splendor, as usual. Eight geldings made up the exhibit, and they weighed from 2,100 to 2,500 pounds each—some horses.

The grand champion steer of the show sold for \$60 per hundred weight. He was fed and exhibited by the Western Meat company of San Francisco, Calif. The quality of the fat stock was extra fine. Anyone who thinks the west is not using pure bred sires has another guess coming.

A decade ago the practice of finishing stock for the markets in Colorado and other western states was almost unknown. A few bunches of sheep had been finished in Northern Colorado with good results and a few growers had fed out a small bunch of cattle on hay from year to year. About this time, however, feeders began to discover that the west was an ideal place to finish cattle and sheep for the market and that stock fat-

but as stockmen became familiar with its possibilities it was more generally used and today thousands of cattle and sheep are annually finished with beet pulp as the basic ration. Other feeds are used in conjunction with the pulp and sometimes grain is given at the end of the finishing period to give the stock a hard fat, but Colorado feeders have demonstrated that they can produce beef and mutton that is the equal of that produced in any other sections and Colorado pulp fed steers have frequently and regularly topped the markets.

During the recent years Colorado feeders have added hog finishing to their other activities and now hundreds of carloads of hogs are regularly fed throughout the state. It was a rare thing a decade ago to find a carload of hogs on the Denver market from a Colorado shipping point or from any of the other western states. Most of the supply came to this market from western Kansas and Nebraska. Now while many shippers in the two states above mentioned continue to send their hogs to the Denver market, the number received from these sources is small compared to the large number of shipments made daily from points in Colorado and other western commonwealths.

"Influenced by the Colorado example, the adjacent western states have proceeded to get busy and are making rapid strides in establishing a feeding industry that is piling up wealth for their stockmen and farmers. So large is the volume of the feeding business now carried on in the territory tributary to the Denver market, that there is a steady stream of cattle, hogs and sheep now coming to this market during the entire year. Ten years ago the local market was crowded during the fall shipping season and again during the spring when the movement of southern cattle from the breeding grounds of the south to the ranges of the north was on, the yards were filled, but at other seasons of the year there was little doing here. The development of a feeding industry in practically all sections of the territory now, however, has changed all this. Stock is coming to this market in large numbers during the entire year. Stock, the quality of which is the finest to be found anywhere, and the Denver market is busy from one year's end to the other, in the fall taking care of the stock which comes in from the ranges to go to the killer's block and to the feed lots, and at other seasons of the year in taking care of the stock which comes from the feed lots round about.



First-prize sheep at the Denver show.

They not only use registered sires, but large herds of pure bred Herefords and Shorthorns have been established.

Western farmers are making great strides in the feeding game. The following is from the Record-Stockman:

"Few industries in the west have made a more rapid advance during the past ten years than the feeding industry, and few at present have a more inviting prospect before them.

tened in the invigorating climate of Colorado on the feeds abounding here, were the equal of any and superior to large numbers of the cattle and sheep finished in other sections where conditions were not so favorable.

"About that time feeding began around the sugar beet factories and stockmen were not long in discovering that beet pulp made a most satisfactory and very reasonable feed. Its use was somewhat restricted at first



First-prize pen of cattle at Denver show.

GLOVER LAND

Northeastern Minnesota Is a Land of Certainties

By HON. FRED D. SHERMAN

NORTHEASTERN Minnesota is not bounded by arbitrary survey lines. As commonly used, the description applies to that portion of the northern part of the state in which conifer timber is found—pine, balsam, spruce, etc., either in extensive forests or in conjunction with timber growth of other varieties, usually mixed hardwoods.

In extent, northeastern Minnesota has an extreme width of about 275 miles from east to west, and an extreme length, north to south, of approximately 175 miles. On the south and west of it are the brush and prairie lands of central Minnesota and the famous Red River valley of the north. Its northern boundary is the Lake of Woods and the waters of the Rainy Lake region, comprising also the international boundary between the United States and Canada. On the east is Lake Superior and the St. Croix river.

Northeastern Minnesota is in the same latitude as the state of North Dakota, Montana and Washington and portions of Idaho, Wisconsin, Michigan and Maine. It is farther south than any part of western Canada.

The area of northeastern Minnesota, some 35,000 square miles, comprises nearly forty per cent of the total area of the state. When it is considered that for more than a score of years Minnesota has ranked as one of the most productive states in the union, attaining that achievement with scarcely half of its acreage under the subjection of the farmer, some idea may be had of the tremendous development the state has yet to experience. Today there still remains within its borders awaiting the onslaught of the plow, practically intact, a vast empire of agricultural land under nourishing skies, with a climate unexcelled for healthfulness, literally teeming with opportunities for the countless thousands whose occupation it invites.

Northeastern Minnesota—land of certainties; the last, best west—an area nearly as large as the state of Indiana or the state of Maine, greater than that of the state of West Virginia and covering more ground than Delaware, Rhode Island, New Jersey, Connecticut and New Hampshire or Virginia, Maryland and New Hampshire combined. It is larger than half the area of either Iowa or Illinois. Northeastern Minnesota is no second-rate country, or worse, no Hobson's choice to which settlers are flocking in desperation because good land in dependable farming regions, once so plentiful and cheap, is no longer available to the new generation. On the contrary, it is a region not only as fertile as other parts of Minnesota, but one that proudly holds its products up for comparison with the best produced in the highly developed farming sections of all states in the north temperate zone. Acre for acre, its soil has been demonstrated time and again to be capable of equaling and surpassing in productiveness land that is commonly held at a price of \$100 per acre and more.

The question is commonly asked, "Why, if northeastern Minnesota is such a wonderful country, has it not been developed long ago?" The settlement of northeastern Minnesota has been retarded by causes not even remotely connected with the character of its soil and climate. For years practically the entire area was withheld from settlement by extensive lumbering operations. Its magnificent timber was early appraised as a tremendous prize, for the possession of which there was keen rivalry among the lumbering interests. Millions of acres were acquired by them and held

until the timber could be removed. For more than 35 years the devastation of the forests has been progressing rapidly. While lumbering was going on there was no demand for the land for agricultural purposes, broadly speaking, for its value for such purposes was not recognized and it was thought to be of value for only its timber. When the fact that this land was exceptionally fertile became known in a limited way, speculators purchased large tracts of the logged-off or cut-over lands on the presump-

tion that it would some day be of great value, paying in many cases but a few dollars per acre. Up to within the present decade land sales in northeastern Minnesota consisted for the most part of dealings in wholesale tracts between speculators, no attempt having been made prior to that time to induce settlement by individuals.

Gradually settlers came into the country, each adding weight to the growing belief in the fertility of the country by demonstrating its wonderful possibilities. The large land hold-

ings were slowly split up and active settlement began. Crops everywhere produced, so far exceeded expectations that the volume of immigration increased year by year, but without any brass band accompaniment. In the last three years the immigration into northeastern Minnesota has increased tremendously. The wide advertising and booming of other sections of America, particularly Canada, previously served to detract public attention from northeastern Minnesota (which never has been boomed) but the settlement of the region by farmers continued without interruption. It is particularly noteworthy that a substantial proportion of those who have migrated to northeastern Minnesota during the last year have come from the prairie states and provinces of western Canada, attracted by the assurances of success and freedom from speculation found in this region where rainfall is ample and the climate equable and dependable. It is in the certainty of success guaranteed the farmer of average judgment and ability, that northeastern Minnesota most strongly appeals to landseekers who desire permanency of location. Practically every difficulty to be overcome before a wealth-producing farm can be permanently established on the wild lands of northeastern Minnesota, is seen by the eye at first sight. Once these physical obstacles are conquered, no climatic hindrances prevent the farmer from reaping his rich reward.

Up in northeastern Minnesota there is one prominent man who does not believe that the high cost of living can be reduced by dissolving trusts, reducing the tariff, investigating the money trust or by other popular agitations.

"If roasting corporations, passing resolutions and viewing with alarm would reduce the cost of living," he has said, "you could board at the best hotels in New York for a dollar a day."

He has a better plan:

"If we would reduce the high cost of living we must stop the flood of population now going on from the country to the city, we must turn the tide and send some of these people back onto the land to be producers instead of consumers."

Then just to convince doubting Thomases that this plan was feasible and to indicate more clearly what land he meant, this plain farmer, Mr. G. G. Hartley, of Duluth, northeastern Minnesota, turned to his Annandale farm within the city limits and on one single acre of land that the year before had been practically useless, wet, stump infested and despised, produced a crop of head lettuce that sold for \$3,000.

Think of it! A three thousand dollar crop on a single acre—let alone considering the fact that this acre the year before the crop was produced was one of hundreds of thousands of similar acres in northeastern Minnesota—swampy and timbered—practically worthless muck land.

There were 32,000 heads on this acre which were not under glass, but out in the open subject to all rigors of the climate. The lettuce was packed in hampers, eighteen to the package, and sold in local markets and in Chicago, Kansas City and other large centers from the middle of July until the frost came, bringing from 75 cents to \$1.50 per hamper.

Of course, these facts and figures given above are not recommended to the average settler who goes to northeastern Minnesota to get a start, but are mentioned to show what has been done and can be done.

Nor in this instance alone did Mr. Hartley demonstrate that an acre of

(Continued on Page 31)



Cattle grow sleek and fat on these pastures.



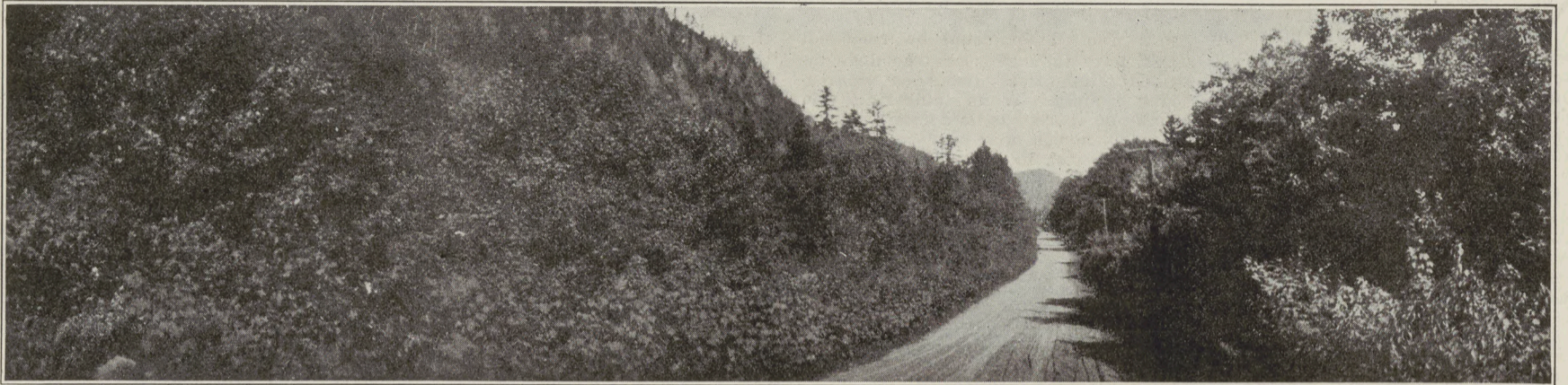
Former timber land (cut over) in northeastern Minnesota.



Beginning a Minnesota sheep ranch.

CLOVER LAND

Prime Importance of Good Roads Proven Over and Over



THE reasons for immediate and extensive road work are the main thing; the details of just how those highways will be laid out and sign-posted are work not only for the Development Bureau but for the highway commissions and commercial clubs throughout the peninsula. And the reasons are many, and often surprising to those who have not studied the subject.

Cloverland is on the way to the biggest period in her history. This year, chances are uncertain whether we draw the cards of slack times and unemployed soldiers, or the biggest development America has ever known. Next year, surely, comes development, travel, reacting, after the last few years, to expand and move and start afresh to seek for happiness.

Cloverland's future is wonderfully bright in those next two years—and it is bound up in them. And every element in that future prospect—settlers, ranchers, business and tourists—rests unavoidably on the good roads and highways of the Upper Peninsula.

In all those things—attractions for tourists, for settlers, for business men, for the ranchers who are coming—Cloverland takes second place to no state in the Union. But the race is going to be run against powerful competition, from states which have advertised longer and bigger, which have a running start—not only in the public's knowledge of them, but in many cases in their roads. And though advertising may bring much, the results will not stay unless we have the highways.

We have big ranchers coming up here; men who have been accustomed to traveling widely over their open country in the west; men who own automobiles and will not be satisfied unless they can use them. We have a Dixie Highway leading from the south up to the Soo—and the tourist coming up that route will hardly begin to see the northern lake, mountain, and pine country we have to offer, unless he can come west from the Soo before starting back—and he has no roads fit for tourist travel from the Soo to western Cloverland.

We have the government planning to put returning soldiers in farm colonies, with the Upper Peninsula strongly considered as one of the places—and soldiers will demand roads and a chance to travel.

We have the government planning to put thousands of army motor trucks into civilian service, with parcel post, freight and express, farm and market work—and demanding roads that will stand the traffic.

Cloverland has infinite possibilities in the next two years. And every one of them is dependent upon good roads and highways.

Tourist travel is the feature first thought of. It offers the quickest re-

By JOHN A. DOELLE

(Illustrated by actual photographs of some of the wonderful roads the Upper Peninsula has built)

turns. It brings people here who will spend their money here, of course. But it also brings people who will go back and advertise this country; who will return again with others, who will come to settle and stay and build up this country. There is abundant proof for this statement. Let me give some instances:

Herbert Cuthbert has been in the tourist business for twenty years; he is now executive secretary of the Pacific Northwest Tourist Association, which is doing perhaps more for automobile touring than any other one organization in the country.

He told the Community Advertising department at the San Francisco convention of the Associated Advertising Clubs of America that in normal times the tourist industry in the United States results in an expenditure of \$700,000,000 a year in the United States. He also said that in Cuba the tourist business is second only to the tobacco industry, and in Colorado it is second only to mining.

He said that in normal times the tourist business is worth \$1,000,000 a day to California. It is frequently said that the tourist industry in New England in one season amounts to more than the value of all the gold mined in Alaska. And we know that the Upper Peninsula can stand up alongside any other part of the United States in comparison of varied scenic beauty.

Minnesota, I believe, is our strongest competitor. It is near, and takes the same tourist business coming up from the south; it has much the same kind of country and scenery to offer.

The Bureau of Service of the Federal Railroad Administration says Minnesota got more tourist business compared with normal business, during the war than any other state. It was normal there last year when it was below normal in every other state—a result of roads plus publicity.

The Ten Thousand Lakes Association of Minnesota, in asking for appropriations for publicity and roads, say they are not doing it as a means

of bringing business to the hotels of the state, but as a means of bringing people from all over the country into the state to spend a month or two there, see the cities, the farm lands, the lake shore properties, spend their money there, not only for living expenses but for things Minnesota has to sell them.

They feel that those people will go away with a good impression of Minnesota, and will become emissaries from whom will be built up for Minnesota a volume of good will which redound to the advantage of Minnesota in every possible way. They will use the summer-time attractions as the basis for an educational campaign through which the resources of Minnesota and the possibilities for business prosperity in Minnesota will become known all over the nation.

"In taking this large view of the business," they say, "you will see that it is impossible, and unjust to the business, to try to measure it in the terms of those things which are incapable of measurement. For instance, a man from Kansas City spent one summer motoring through one of the Minnesota lake regions and last season came back and with a friend, purchased a beautifully wooded section on Leech Lake and built two homes, with a total investment of \$50,000. In another instance, a man and his wife from Indianapolis who were stopping in St. Paul were attracted by a furniture sale at one of the department stores and bought a \$300 set as a wedding present for a niece. All furriners in that city also report a large volume of business from tourists."

The Minnesota state highway commission is asking the state legislature to submit to the people in November, 1920, a state constitutional amendment creating a state trunk highway system of approximately 6,000 miles, to be constructed, maintained, and improved by the state, by a \$100,000,000 bond issue. Minnesota is also appropriating \$100,000 for a two-year program of publicity. That

shows the kind of competition Michigan will face in the next two years.

Our own Michigan legislature is asked to submit next April a \$50,000,000 bond issue for highways. The legislators are favorable. A considerable part of that should go into the highways of the Upper Peninsula, the best tourist part of the state. And it is up to us to do the public education that will bring passage of the issue when it goes to the vote. We can do it in two ways—by publicity, and by improving and making good on the roads we have now.

Washington, British Columbia and Oregon had an appropriation last year of \$112,000 for such publicity work as Minnesota is doing, and official reports show the expenditures of other states in proportion.

Wisconsin is putting in a trunk system of roads to tap every community in the state.

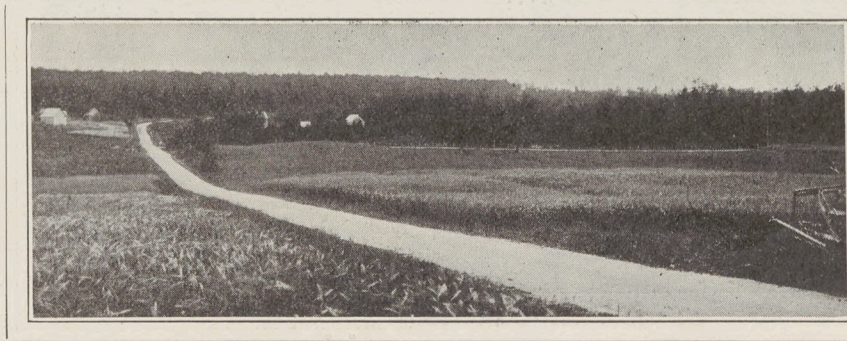
T. J. Ehrkart, commissioner of highways in Colorado, says that 40,000 cars with 180,000 persons visited that state last year, staying an average of 25 days and spending an average of \$3.20 a day, or \$15,600,000. He estimates a 20 per cent profit or \$3,120,000 for Colorado business men. The tourist business promises to be the greatest single resource of that state.

Colorado history has acquired a saying that "The Tourist of Today is the Settler of Tomorrow." Fully 30 per cent of the travelers who go into that state each year are in search of land, mining claims, or business opportunities of some kind, and a large share of the other 70 per cent buy or build summer homes there and come back each. They do it partly by their roads, partly by publicity, partly by furnishing free camping sites along every highway, free to visitors. And the Upper Peninsula during the summer season has nothing to lose in comparison with Colorado. It is far more an undeveloped country. It averages as high in scenic attractions. It is the ultimate 100 per cent, to which to apply Colorado's argument.

In our own Cloverland, we know right now that motorists do not even get through to the Soo from Marquette because connecting roads between Marquette, Alger, Delta and Menominee counties are in such bad condition that motorists cannot be advised to attempt them. I am quoting a Marquette garage man on this. And this is in spite of good roads within each county. It forcibly illustrates the need of a good roads viewpoint that will take in the entire Upper Peninsula.

A glimpse of what we might have is found in Marquette, where one garage man alone gets \$1,500 of business from tourist trade each summer and other garages and hotels and restaurants bring the city's summer tourist

(Continued on Page 36)



CLOVER LAND

Wisconsin Sheep Win Firsts at 1918 International Show

(Pictures and Story by Courtesy American Sheep Breeder, Chicago)

WHAT is the International? It is a host of things: a battle for supremacy by bloodless victory; a court of appeal from decisions of less authority; a mile-post on the road of livestock progress; a shrine at which foregather the worshippers animal worth; a university to those athirst for knowledge of the breeder's art; an exhibition of brute loveliness; an exhibition of the works of master artists of the field and fold; a fount of inspiration to greater things in livestock endeavor; a glad reunion of animal husbandmen of high and low degree.

Not merely reportorial enthusiasm but the sum of other's opinions brings the conclusion that the sixteen International sheep shows do not include a better one than that upon which the gates have just been closed. Breed after breed equaled or surpassed the strong exhibitions of yesteryear and few there were that fell behind their best records. Why should it not be so? Does not the event portray the highest attainments of an onward moving industry in which each year chronicles some advance?

A goodly number of Canadian breeders braved the red tape terrors of the boundary line and made the journey from the north. Thus was the event truly international. California, Wyoming and Maine met with Oklahoma and Ontario to bespeak the country-wide aspect of the industry.

Imported animals were few and far between. Complete independence from the breeders of the tight little isle has not been and should not be declared, but the glory of the achievements of American flockmasters when they stand upon their own feet should not pass without comment.

That special prizes from the breed associations bring out a better display than would otherwise occur is cast in doubt by the sight of the splendid shows made in some cases in the absence of liberal encouragement from this source. For the sake of the continuation of such exhibits, however, it is better to say that such meritorious efforts should not go long unrequited.

Always a strong supporter of the wether show the colleges assume each year a larger role in the breeding classes. Seven of them representing the states of Illinois, Iowa, Kansas, Missouri, Ohio, Oklahoma and Wisconsin entered the lists with breeding stock. It is to be hoped that even more of the educational institutions will come without the academic shades and try the test of strength with the fruits of their breeding efforts.

In the wether prize lists the totals show that both grand championship and reserve, eight breed championships, twenty-seven firsts, fourteen seconds and nine thirds went into the possession of private breeders, while the colleges gathered in four breed championships, fourteen firsts, twenty seconds and eighteen thirds. The colleges had a total of fifty-seven ribbons and the breeders fifty-four, but the latter had the lion's share of the purples and blues with the colleges leading in reds and whites.

Adorned by a venerable spinning wheel the wool exhibit showed to those who stopped to study its lessons, the market classes and grades of wools and



1918 Champion yearling Shropshire ewe. A. Broughton, Albany, Wisconsin.

various stages in the making of yarn and cloth.

Sure proof of the growth of International exhibits is found in the absorption for use as cattle stalls of the west wing running south of the amphitheater which formerly introduced the visiting public to the sheep display. To care for the sheep, in turn, a new barn south of the sheep judging provided last year was put in order.

The Fat Wethers

The slow, sure approach toward perfection in mutton form and finish bore its rich fruit in a superb display of fat wethers. Though the market demand for rams has been strong and the mutton market none too encouraging yet a splendid show of individual sheep, manifesting, for the most part, the utmost readiness for the butcher, survived.

The yearling was omnipresent in the championships. The point of view which sometimes puts the steer calf or the youngest of the barrows into premier honors in their fields of endeavor has not yet been introduced into the wether show though the logic of the every day market attitude would justify it there if anywhere.

Shropshires

The keenest of the critics agreed that the Shropshires presented a royal pageant for the numerous lovers of the breed. The sixteen yearlings entering the joust were a "classy" lot. Seven of the blockiest were promptly sorted out by E. L. Shaw, Morgan-



First-prize pen Shropshire lambs. A. Broughton's farm, Albany, Wisconsin.

town, W. Va., for final consideration. The Pines Farm Shepherd confidently headed the class with a wether of unusual parts. Manifesting quality to the utmost, contained within the neatest of lines, carrying no excess fat, though somewhat short in firmness, there was no other position for him. Wisconsin was second with a wether of slightly more length of leg, less trim along the underline and a trifle less baggy in the breeching, but possessed of a very wide, well covered back. Below him stood a rather more blocky one, true in his lines and hefty in the leg, but lacking the extremity of development in the loin and rib portions of his carcass. Fourth place went to an excellent wether not so prime in condition, while the fifth was a smaller pattern also a few degrees short in fatness.

Bradburne again hit the top in the lamb contingent with one of beautiful type and trueness of lines quite ready for the butcher. The next three places flew the Wisconsin flag, one of higher condition and weight of hind quarter receiving the red, and a true typed, solid fleshed one getting third money.

The Mutton Improvement Special

The special prizes offered by the Union Stock Yards Company for the offspring of mutton rams and produced by ewes lacking in mutton form and breeding brought out an attractive educational exhibit. This year it was expanded to include the second crosses or the progeny of the yearling ewes produced by the initial

cross. The original mothers of the lambs were shown along with their offspring and a picture of the ram used was also on display. Placards over the pens told of the method of handling and feeding the lambs and their weights at the time the show opened. The Ohio State University and Pennsylvania State College both are using grade Merinos for the ewe foundation, while the University of Wisconsin is using western ewes. At all three institutions the ewes have been mated with Southdown rams. Awards were as follows:

Clay, Robinson Specials

Class 1 — Wether over 12 months and under 24: 1st, University of Wisconsin; 2nd, University of Wisconsin; 3rd, Iowa State College.

Class 2—Wether lamb under 12 months: 1st, University of Wisconsin; 2nd, University of California; 3rd, Iowa State College.

Class 3—Champion wether: University of Wisconsin.

Class 4—Best five head of wethers under two years: 1st, University of Wisconsin; 2nd, Iowa State College; 3rd, University of California; 4th, Purdue University.

Mutton Improvement College Special

Class 1—Pen of 3 wether lambs: 1st, University of Wisconsin; 2nd, Pennsylvania State College; 3rd, Pennsylvania State College.

Class 2—Pen of 3 ewe lambs: 1st, University of Wisconsin; 2nd and 3rd, Pennsylvania State College.

Class 3—Best lamb: University of Wisconsin.

Class 4—Pen of 3 yearling ewes: 1st, University of Wisconsin; 2nd, Pennsylvania State College; 3rd, Ohio State University.

Class 5—3 lambs, ewes and wethers from half blood ewes: 1st, University of Wisconsin; 2nd, Ohio State University; 3rd, Pennsylvania State College.

Milwaukee's Organized Work During 1918

By A. T. VAN SCOY

President Milwaukee Association of Commerce

AS PRESIDENT of the association, I cannot refrain at this time from pointing out in a somewhat general and brief way the activities of the year just closed. The nation's participation in the great world war imposed new duties and responsibilities upon commercial bodies everywhere. It at once lifted the Association from the labors of immediate local concern into a national sphere. The government disseminated many of its instructions through commercial organizations and sought their counsel and judgment in various problems involving the efficiency of the country as a war waging power.

The Milwaukee Association of Commerce readily adapted itself into a war aid organization and became a loyal and aggressive co-worker in the nation's great cause.

It would require more time than is allotted to me here to enumerate the splendid war service rendered by this Association during the year just closed. I can only point to a few of the larger undertakings engaged in.

(Continued on Page 35)

CLOVER LAND

Improved Rye for Cloverland

By E. B. HILL of Menominee



Forty-four bushels to the acre of this Rosen rye.

WHO would not be satisfied to grow a variety of rye that has a recorded yield of 44 bushels to the acre? From the experience of a large number of farmers in Menominee county, Cloverland, who have grown such a rye, it has proven to be winner.

Rosen Rye is the official name of this rye. It was first brought over from Russia in 1909 by Mr. Rosen, a student of the Michigan Agricultural college. Single kernels of this rye were tried out by Professor Spragg, plant breeder for the college. The more promising heads were kept for seed and have been the cause of a remarkable increase in the rye fields of the state of Michigan since its first distribution to farmers in 1912.

Rosen Rye is a stiff strained, large headed variety, which, when pure, ordinarily has four full rows of grain on over 99 per cent of its heads.

In the fall of 1916 the Menominee County Farm bureau brought three bushels of inspected, certified Rosen Rye from Lower Michigan and distributed it to three farmers. In all three cases common rye was planted on the same farm, but at quite a distance to prevent mixing. The next summer this rye developed a much better straw and a larger, plumper head containing more kernels and proved to be a larger yielder than the common rye.

From these three farms the fame of this rye spread, so that in the fall of 1917 eighty-seven farmers were grow-

ing this certified Rosen Rye for the first time. Two hundred and seventy acres were then planted. These eighty-seven farmers were so well satisfied with this high yielding rye that this fall, 1918, 250 farmers planted over 900 bushels of home-grown Rosen Rye. Over 100 bushels of pure, inspected Rosen Rye were shipped by farmers in Menominee county to seven other counties in the Upper Peninsula, where it is proving to be as good a winner as in all other parts of the state.

The introduction and distribution of this superior rye was due to the efforts of the Menominee County Farm bureau, which is continually striving to make farming in the county a more profitable business and to make the country a better place in which to live.

The honor of raising the largest number of bushels of this rye to the acre goes to Henry Berquist of Stephenson, with a yield of 44 bushels. The next highest yield was made by Gust Theuerkauf of Menominee, with a six-acre field that averaged 40 bushels to the acre, machine run. Magnus Toberg had a small field that yielded at the rate of 42 bushels.

The average yield of the 87 Rosen Rye growers for this year was 22 bushels to the acre. The best 25 of these men averaged 27½ bushels. The average yield of the common variety of rye for the past season has been about 15 bushels. This shows the great advantage of the improved and

pedigreed varieties of seed over the "scrub" seed still being planted in some districts.

It should be remembered that last winter was the hardest season on winter grains that we have had in a number of years, and that the above yields are very good, taking that into consideration. In normal years the average yield would be somewhat higher.

Last year with 87 farmers planting 200 acres of Rosen Rye, yielding an average increase over common rye of seven bushels to the acre, the result-

ing increased profits would amount to over \$2,300. This year with 250 farmers seeding over 650 acres, taking the same average increase, there will be an increased profit of \$7,507.50.

Improved grains, developed by the crop specialists in the agricultural colleges and distributed throughout the farming districts by the farm bureaus, pay good dividends. If you are going to grow rye, why not grow the best—pure, inspected Rosen Rye—which averages seven bushels to the acre more than common rye?

Secretary Houston's Tribute to Farmers

TRIBUTE to the part played by the nation's soil tillers in winning the war is paid by Secretary Houston in his annual report for 1918, transmitted to Congress by the White House.

Bumper crops were grown in spite of adverse weather, the secretary says, and the millions of men, women, boys, and girls on the farms performed satisfactorily the supremely important task of sustaining their own country and its allies.

Emphasizing the difficulties and the absence of glamour in the war job of the farmer, Mr. Houston speaks with satisfaction of the change during the last year toward giving agriculture a larger place in the newspapers and world's thought.

Farmers Take Big Risks.

"It is one thing to ask a man to save," the secretary says, contrasting the task of the one who conserves and the one who produces, "it is another to ask him, confronted as he is by the chances of the market and the risk of loss from disease, flood, and drought, to put his labor and capital into the production of food and feeds and the raw material for clothing."

Pointing out that the size of the harvest may not measure the labors of the farmer, Mr. Houston records that the land planted this year in principal products aggregated 289,000,000 acres, or more by 5,600,000 acres than in the preceding record year.

Estimated meat, milk, and wool production is shown as follows:

	1918.	1917
Beef (pounds)	8,500,000	7,384,007
Pork (pounds)	10,500,000	8,450,148
Mutton and goat (lbs.)	496,000	491,205
Milk (gallons)	8,429,000	8,288,000
Wool (pounds)	299,921	281,892
Eggs (dozen)	1,921,000	1,884,000
Poultry (number)	589,000	578,000

45,000,000 Acres of Wheat.

Of next year's prospects the report says:

"It is too early to make detailed suggestions for the spring planting season of 1919. During this fall the department, the agricultural colleges, and other agencies carried on a campaign for a large wheat acreage, and indications were given by states as to where the requisite planting could be secured without calling for an extension of the area or even a normal acreage in the states which had suffered from drouth for two years.

"It was suggested that if possible at least 45,000,000 acres of wheat should be planted. The informal indications coming to the department are that the farmers exceeded the planting suggested by the department.

"We do not know how either the wheat or the rye will come through the winter, and are not now able to state what the requirements should be for the next season, nor can any one now tell what the world demand will be at the close of the harvest season of 1919.

Must Feed Most of World.

"We do know that for the ensuing

months the nation is likely to be called upon for large quantities of available food and feeds to supply not only the peoples with whom we co-operated in the war but also those of the neutrals and the central powers. This will involve a continuation of conservation on the part of our people, and probably of the maintenance of a satisfactory range of prices for food products during the period."

Increased values for all farm products are shown. "On the basis of prices that have recently prevailed," the report says, "the value of all crops produced in 1918 and of live stock on farms on Jan. 1, including horses, mules, cattle, sheep, swine, poultry, is estimated to be \$24,700,000,000, compared with \$21,325,000,000 for 1917, \$15,800,000,000 for 1916, \$12,650,000,000 for 1914, and \$11,700,000,000 for the five-year average.

In recommending steps to facilitate land settlement in more orderly fashion, the secretary emphasizes the importance of encouraging the ownership of farms.

As to highway development, he says co-operative roads work under the federal aid act will be resumed in full measure and vigorously prosecuted.

The report closes with an appeal for extension of the benefits of modern medicine and sanitation to the scattered populations of the rural districts.

Must Conserve Health.

"A vast deal remains to be done," it says, "to control such pests as mosquitoes and the hookworm, to eliminate the sources of typhoid fever, and, even more, to give the country districts the advantages of modern hospitals, nursing, and specialized medical practice.

"The economic wastes from unsanitary health surroundings and from disease are enormous. It is impossible to estimate their extent. It is even more impossible to assess the amount of existing preventable human misery and unhappiness. The remedy is difficult.

"The extension and improvement of agriculture, including the drainage of lands, the clearing of swamps, and the construction of good roads, make for betterment. The department of agriculture, through its home demonstration service, is giving valuable aid, and the public health service is increasingly extending its functions, especially recently under an appropriation for this purpose of \$150,000.

Sanitary Surveys Urged.

"It seems clear that there should be no cessation of activity until there has been completed in every rural community of the union an effective sanitary survey, and, through the provision of adequate machinery, steps taken to control and eliminate the sources of disease and to provide the necessary modern medical and dental facilities, easily accessible to the mass of the people."



Notice the difference in the crops on this field, partly common rye and partly Rosen rye.

Cloverland Farmer's Experience with a Money-Saving Tractor

By EDWARD J. HODGKINS of Delta County

I WILL answer as far as I am able all that I know about tractor farming in Cloverland.

First, our farm is a 320-acre farm, 185 acres being under cultivation. The land is clay loam and slightly rolling.

Second, the tractor was purchased due to the shortage of labor that swept over the country when the United States entered the war. The crops had to be put in one time and with the labor problem staring us in the face we decided that we would do the next best thing, always being a firm believer in labor-saving machinery, we purchased a tractor. The Case tractor was purchased in the spring of 1917 from the Case agent at Escanaba, Mich., and was put to work right away, doing the plowing and preparing the seed beds for planting. Forty acres being plowed and prepared by discing and harrowing. The tractor was next used in haying for pulling a loader, about 100 tons of hay being loaded. The next that we used it for was to fill our 36-foot silo with a blower machine. After this came the fall work, about forty acres being plowed. This ended the first year of our tractor farming experience, which we thought was a success.

The second year found us in better shape. Having had the tractor we had most of our plowing done, only about twenty acres of our own left to be plowed. We went at this and had our crops in on time and helped our neighbors with their spring work, plowing about twenty acres and double discing same twice. This was one thing that we never had time to do when we depended on horses for the sole source of power. Next came the haying crop, about 75 tons being loaded with the loader pulled by the tractor. Then came the silo filling again

and the fall work, about 75 acres being plowed. All pieces were double disced twice and harrowed once so that the seed beds were put in better shape by the use of the tractor than they used to be put in by the use of the horses.

The total number of acres plowed, as close as I can figure, has been about 200 acres. One hundred and fifty acres being plowed, double disced and harrowed. Some work was also done with horses, such as finishing lands and harrowing and seeding.

All plowing was done eight inches deep and deeper. The fuel consumption per acre being about two and three-fourths gallon of kerosene and about one gallon of lubricating oil to every six acres. For grease cups and transmission the average is about one pound per day. The tractor requires about two quarts to one gallon of gasoline per day, depending on the number of stops.

All fuel rations vary with different kinds of work, whether light or heavy and condition tractor is kept in.

The tractor was used for sawing wood, grinding feed, road work, produce hauling and spreading manure.

The tractor used is of the Case two-plow type A 9-18, four cylinder, gear driven, four wheel and a real kerosene burner.

The total cost of up-keep so far has been \$6.50. One gasket, \$2; clutch lining, \$1, and four new spark plugs, \$3.50.

In concluding, anyone can easily see that we now have our work done on time and in good shape and cheaper and with less manual labor. It can be readily seen from this that the tractor owned and operated on Hodgkins Brothers' Clover Crest Farm at Pine Ridge has surely been a success.

235,000 Acres of Cut-Over Lands

We own and offer on exceptionally favorable and easy terms 150,000 acres in Delta, Schoolcraft and Alger Counties, Cloverland, Michigan.

Also 85,000 acres in the clover districts of Northern Wisconsin. Tracts of all sizes. Terms to suit.

Bay de Noquet Co. Oconto Lumber Co.

George J. Farnsworth, President

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To Our New Cloverland Grazers:

Before your start for Cloverland in Northern Wisconsin and Michigan do not hesitate to send your name and your new address to

LAUERMAN BROTHERS COMPANY, MARINETTE, WIS.

We will then put you on our mailing list for price lists and quotations on whatever you may need.

This is the Northwest's largest depart-



ment store (wholesale and retail) and our service will quickly show you why we have the confidence, friendship and patronage of the farmers and ranchmen of Cloverland.



LAUERMAN BROTHERS COMPANY, MARINETTE, WIS.

"The Store With a Conscience."

An Arizona Cattle Man's Statement About Cloverland

By FRANK M. KING of Tucson

A GREAT deal has been said and written about Cloverland, as the Upper Peninsula of Michigan is known, but half the story has not been told at that.

When the writer met Charles R. Hutcheson, extension specialist of the Upper Peninsula Development Bureau of Michigan, and now editor of Cloverland Magazine, at Tucson, Arizona, last March, he thought the gentleman was trying to sell somebody a "gold brick" and that it was not till after about two days' argument that I decided to visit that great land of lumber, grass and water, which I did in April of last year, just as the snow

was disappearing. I was surprised at the amount of old feed there at that time, with green grass three and four inches high coming up underneath. Cattle had been turned out of their sheds and barns and were filling up in great shape.

During the summer, I spent several weeks in the Upper Peninsula of Michigan and looked it over very carefully, going over all the west half and finally selecting a whole township of land in Schoolcraft county, twelve miles north of Manistique, for myself and partner, M. S. Plummer.

This tract, like the greater portion of Cloverland, is cut-over timber land, on which an abundance of clover, blue grass and timothy are growing, with worlds of water everywhere. Several small creeks and three lakes are on this place, with two rivers running through it. There are no boggy places, as there are good sandy approaches to the watering places. On this township we have several thousand acres of fine meadow lands, with an abundant growth of red top and blue joint grass, which makes a splendid cheap hay for wintering cattle. These meadows are so well drained that mowing machines are run over them in cutting hay with ease. This meadow hay is a big asset in wintering cattle and also in feeding cattle that are taken in before the snow goes off. With plenty of this hay it is found very profitable to take cattle in about March, and fill them up and get them in good shape to start with the grass in April. To secure the best results, as every cow man knows, it is necessary to get the cattle on the ground very early, and then keep them on the best feed all through the season.

We have plenty of grass on our place to keep our cattle going in good shape, and as we will seed several hundred acres each year, we will soon have the whole tract with a solid stand of grass.

We will arrive at our place the first of May with 1,000 head of high grade southern Arizona cattle. These cattle will be in good condition and will be dehorned and given every chance to get fat. We expect to top out the best ones and finish them on grain, which we will raise on our own land. Those that won't make beef, we will winter and beef them next year. Building material is so cheap there that it will cost very little to build cattle sheds, and our feed, which we will harvest on the ranch, will not be expensive.

Quite a number of people have asked about Cloverland and its possibilities, and I want to say that it is all right and I consider it the best grazing proposition now available in the United States. If cattle won't do well on all the clover, timothy and blue grass they can eat, with plenty of water close by, then I don't know what it requires to make a cow proposition. I have made three trips to that country during the last year and have seen both ends and the middle of the seasons. I have done a lot of investigating and have watched the results of pasturing cattle there, with the result that myself and associates are giving it a practical test, with every prospect of success. We have seen very poor cattle placed on pasture there and when given half a chance have made great gains, and good profits to their owners. Of course, stock must be taken in early, to get the best results, as every well regulated cow man knows. Taking cattle into a short season country late is not doing the country justice, nor is it fair to the cattle nor the owner. As I have stated before, there is no doubt but what

Cloverland is a great pasture country, and by using common sense and a little business judgment, anyone should succeed there.

The most of these cut-over timber lands are handled through the Upper Peninsula Development Bureau, which was organized for the purpose of advertising the lands and locating practical cattle and sheep men there to utilize these great tracts of valuable lands, that had lain idle for so many years. Mr. Leo C. Harmon, that prince of good fellows, who not only conducts a big hardwood lumber company and a bank, but other business, is president of the bureau. Mr. Harmon was raised on a cattle ranch in Montana, and while he has "fallen from grace" to the extent of becoming a rich lumberman, the "taint of the bovine" is still with him and he often longs to get out and watch the broncho mustang cow kick up her festive heels. Mr. Harmon has had a corps of able assistants, also, and none have done more than Charles R. Hutcheson of Escanaba, who has made trips west to tell the stockmen what Cloverland holds in store for them.

This land is sold under lease and bond, under very liberal terms. The payments are easy and the price is attractive, ranging from \$5 to \$20 per acre, according to location and the number of acres taken. The Upper Peninsula Bureau is not a real estate company, but a public enterprise not organized for profit. The bureau locates you and secures the contracts from the owners for you. You can get any sized tracts that you feel able to handle.

Correction

The very interesting statement in the January Cloverland Magazine about the immense 1918 tonnage through the St. Mary's river and the Soo Canal should have read 90,000,000 tons instead of 90,000 tons. The traffic through the Soo Canal has been growing year after year until today it is the greatest waterway in the world.

There being one case of smallpox in Munising, Health Officer O'Brien thought it would be wise to get the pest house in readiness in case of necessity. The building was erected several years ago on a lot purchased by the city near the dumping ground, and after it was last used the place was locked up with all the furniture stored in it. The health officer sent Chief of Police Levy to the place to get it in shape for use. The chief located the lot all right, but he could not find the building nor the contents, so he reported back to the health officer that he would have to give up the search or turn the case over to Sherlock Holmes.

Traverse City claims the record for being the best Michigan city, so far as crime is concerned. There are two justices of the peace who work on fees. For three months, neither has earned a nickel.

125

Bred Ewes Given Away



Free Offer to the Boys and Girls of Cloverland

Cloverland Magazine will give away during the spring of 1919 ABSOLUTELY FREE to boys and girls of northern Michigan, Wisconsin and Minnesota



The Pet of the Shepherd at Whitney Farm, Cloverland

125 Pure Bred Ewes, Bred to Lamb This Spring

These ewes are pure-bred stock of the highest grade, and will lamb late in April or early in May. Start a little flock of sheep of your own. Make pets of the little lambs while they are getting ready to make money for you. The bred ewes will be delivered to you in carefully boxed crates with all express charges paid by the Cloverland Magazine.

We invite boys and girls to fill out and mail the following coupon to Mr. Andrews, the publisher of Cloverland Magazine. By so doing you will not be under any obligation whatever.

COUPON

Roger M. Andrews, Publisher, Cloverland Magazine, Andrews Building, Menominee, Michigan.

Mr. Andrews: Write at once and tell me how I can become the owner of one of your pure-bred ewes without it costing me any money.

Name

Town or R. F. D.

R. F. D. or Street Address

State



Arizona cattle after a brief stay in Cloverland.

Northern Wisconsin

in the

Heart of Greater Cloverland

Offers as fine grazing and farming area
as is available today

MILWAUKEE

The state's metropolis, tenders you its service, offering every aid that may acquaint you with this wonderful Northern Country. Your success in Northern Wisconsin is Milwaukee's first consideration

Its Association of Commerce

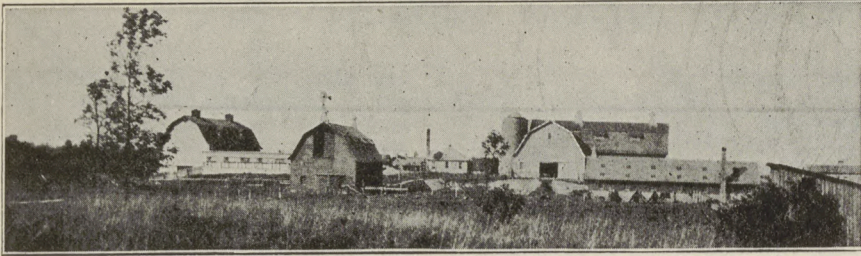
therefore—having nothing to sell you, seeking no profit thru you—will frankly measure with you your chance for success—will place you in touch with disinterested state agencies and will assure you, in Northern Wisconsin

A SQUARE DEAL

under which alone, successful accomplishment in the greatest "New Country" is possible.

THE MILWAUKEE ASSOCIATION OF COMMERCE
ATHLETIC CLUB BUILDING

MILWAUKEE, WISCONSIN



1,600 Acre Stock Farm Equipped Complete For \$65,000

Mr. Stockman:

We are offering for sale this 1,600-acre farm complete with 500 acres developed, balance clover and blue-grass pasture, fenced and cross-fenced, with miles of woven wire; also between 200 and 300 head of horses, cattle, hogs and sheep; complete line of agricultural implements, hundreds of tons of hay, all the grain and nearly 500 tons of corn silage, all for \$65,000, with easy terms of payment. From 1,000 to 10,000 acres of cut-over pasture land joining could be added, if desired, at a very reasonable price. Write for inventory and full particulars.

Mail us a card for our FREE book and list of farms for sale, with full information in regard to farming, stock-raising and the possibilities in Menominee County, Cloverland.

We own 100,000 acres of the best quality of grass land, within four miles of a railroad, and are selling it to farmers and stockmen at prices ranging from \$10.00 to \$25.00 per acre.

Come to Menominee County, the most southern, best developed agricultural county and the Gateway to Cloverland, only nine hours' ride from Chicago.

SALES DEPARTMENT

Menominee Abstract & Land Co.

Menominee, Michigan, Box 64.

1919 Will Be a Year of Increased Business for the Merchants of Greater Cloverland

DURING 1918 Western grazers brought \$700,000 worth of livestock to the new grazing lands of Cloverland, and sold their 1918 meat products for \$400,000 in cash.

Many more grazers will come during 1919.

The Carpenter Cook Company is earnestly co-operating in this development work, which will mean so much to every merchant, large and small, within this great new empire of the north.

We want to combine with our present and prospective customers to give the best service and the best goods to our patrons, and we will begin in the March issue of Cloverland Magazine a campaign of publicity which will help every store-keeper who is now, or will be, working with this pioneer wholesale grocery concern.

CARPENTER COOK COMPANY WHOLESALE GROCERS

Menominee, Mich.

Ishpeming, Mich.

Distributors of the famous
GOLDEN CUP Coffee

An Invitation to American Sheep and Wool Growers

By HON. A. C. CARTON

WHEN the makers of the Great Seal of the State of Michigan wrote upon it, "Si quaeris Peninsulam amoenum, circumspice," which means, "If thou seekest a beautiful peninsula, look around thee," they must have been endowed with wonderful foresight or acted more wisely than they knew, for of no other place in the eastern or western hemisphere can this more truthfully be said.

Situated as Michigan is in the great north temperate zone, surrounded by the Great Lakes, which modify the blasts of winter and cool the hot summer breezes, with her fertile lands stretching in every direction, dotted here and there with wooded areas of almost every variety, from the maple and pine to the sturdy oak, she is indeed a beautiful peninsula.

While Michigan was settled in the very early part of the eighteenth century, she can justly be called at the present time the undiscovered state of three and a half million people, because within the boundaries of this great commonwealth there is yet to be discovered one of Michigan's great sources of wealth, and that is the proper utilization of her twelve million acres of unoccupied lands for grazing purposes.

This great area, which comprises one-third of the state, is well sprinkled with from thirty to thirty-five inches of rainfall; beautiful lakes of

every size are found in almost every surveyed township; the whole surface of the country is traversed by beautiful rivers and rivulets, and bunch grass and tame grasses grow in abundance.

The soil is diversified, running from sandy soil to the heavy clays, and from hill-side to the grass-covered valleys. The very diversity of the surface makes its an ideal and permanent grazing country, as there will be some part of every large tract of land that will produce plenty of feed, regardless of what the rainfall may be during the grazing season.

Michigan has wonderful transportation facilities, both by land and water. It is situated close to the great markets of the world. Fifty millions of people in the United States could reach central Michigan by riding on the railroad trains for twenty-four hours.

The western grazer who comes to Michigan and discovers its great possibilities as a grazing country will be rewarded the same as the early settlers were who discovered gold in California in forty-nine.

Come to Michigan and spread your landless sheep over our sheepless land. Come to the state that is the center of the great home markets. Come to Michigan, the state of three and a half million people, with its undiscovered possibilities.

Important Announcement to Cloverland Readers

Our Service Bureau will mail you upon request complete Livestock and Market review of eleven principal cities of America—Chicago, Omaha, St. Louis, Denver, St. Paul, Kansas City, Buffalo, Fort Worth, Sioux City and El Paso. In this manner the widely scattered markets in America are before you. Expert advice on future outlook, also a past review.

Above information is of inestimable value. Will be mailed you free every week upon request.

(Cut out and mail to Cloverland Magazine, Andrews, Building, Menominee, Michigan.)

If you are a subscriber to Cloverland—

Mark cross in square.

Mark here if not a subscriber.

Name.....

Town.....

R. F. D..... State.....

Cloverland Magazine:—
Please send to above address, without cost to me, the Weekly Market Report. I am interested in market reports.

Branch of farming.....

Copper Country's Incomparable Climate

By ROBERT H. SHIELDS

FOR a long time I have realized what a valuable asset the Copper Country has in its incomparable climate. I do not refer to the very mild weather we have been having during the present winter, for it has been quite general throughout the country; but I mean our regular year-after-year summer climate. Some day I hope the climate of the Copper Country will be appreciated to the extent that it may be capitalized and so made to yield a very handsome return to its people. This is no idle thought; on the contrary it is worthy of the most serious consideration. We hear much of the Florida climate and that of California, and the wise people of those states have capitalized it so that millions of dollars are being poured into their coffers by tourists every year. This result has been brought about by judiciously advertising their climate.

Now if people of the Copper Country go to Florida and California to escape the rigor and severity of our winters, why wouldn't thousands of people between there and here come to the Copper Country to escape the intense heat and mucky humidity by which they are afflicted throughout the summer months, and of which we are practically exempt, if they are informed of the wonderful climate we have here during the months of June, July, August and September? In all the world there is none better.

With the advent of good roads to the outside world, which will be made possible by the completion of the connecting link in Baraga county, the Copper Country ought to become the Mecca to which every weary, overheated, tired, sunburned and dusty traveler would eagerly turn. They will do so as soon as they are convinced,

and they can be convinced by judicious advertising.

Think what it would mean to the people of the Copper Country if thousands of automobile touring parties should come here annually, as they surely will if our wonderful summer climate with its warm and comfortable nights, is made known to them. Already we have seen an occasional car here from nearly every state in the union. Think how many could be induced to come when the good roads are completed, if they are told of our warm summer days tempered by the breezes of Lake Superior into cool evenings.

Last year I took a friend from Ohio for a drive through Keweenaw county. He had been auto touring all over Europe, but he declared there was nothing better anywhere than the ride from Houghton to Copper Harbor. Indeed it would be hard to imagine any prettier drive. Skimming along the shore of Portage Lake, passing the many interesting stamp mills and smelters, we reach Lake Linden, the greatest stamp mill town in the world; then up the gentle rise to Calumet, where the mines are; then in a few minutes into the second growth woods of Keweenaw, racing along the staid but fantastic cliffs for miles and miles; then breaking into full view of good old Lake Superior, we arrive at Eagle River with its quaint and really historic places; a short respite and we climb the hill and skirt the half hidden shores, passing abandoned villages and mines, until we again come into full view of Lake Superior, stopping for a quaff at the spring on top of the hill, with Eagle Harbor some four miles beyond, and the general view far beyond one's imagination.

(Continued on Page 31)

THE SPIES REALTY COMPANY

MENOMINEE, :: MICHIGAN

owns the cut-over lands of a large lumber company operating in various parts of Cloverland.

Inquiries cordially invited.



THE SPIES REALTY COMPANY

Spies Building

Menominee, Mich.

A Real Sheep Opportunity

Investigate Lime Island, Chippewa County, Michigan, in the famous St. Mary's River.

Seven hundred acres, mixture of 550 acres high or sloping land; 150 acres low.

Soil formation—limestone, gravel and sand.

Ideal brush lands for sheep grazing, no fencing and little care required.

A village and school on the island. Daily steamer to Sault Ste. Marie, 35 miles away.

Many farms on the adjoining islands and mainland.

A unique proposition which will be made interesting to some wide awake western sheep grazer.

Write for Information to

PITTSBURGH COAL COMPANY

T. F. FOLKNER, *Manager*

Sault Ste. Marie, Michigan.

A Michigan Bargain

20,000 acres of the best cut-over grazing lands for sheep and cattle in Michigan.

Located in the upper part of lower Michigan between Lake Michigan and Lake Huron, with the Michigan Central Railroad on one side and the Grand Rapids and Indiana on the other, making shipment convenient either by rail or water to eastern or Chicago markets, and for the next fifteen years a standard gauge railroad will be operated by Cobbs and Mitchell, right through these lands.

For a very small cost cattle and sheep can be taken to and from these feeding grounds with very little or no driving.

Plenty of low land and water.

Many spring brooks running through these lands, besides some small lakes.

Abundance of timothy, clover and blue grass; also produces excellent corn, oats, fruit, berries and vegetables.

Prices range from \$9.00 to \$12.00 per acre.

A special price will be given for the first section of this land sold.

For further particulars, write

E. L. STANFORD, Agent

MARQUETTE, MICHIGAN



Under the supervision of both the United States Government and the State of Michigan

RELIABLE cattle or sheep men locating in our vicinity will find us ever ready and willing to assist them.

Both Savings and Commercial Departments, and, for the accommodation of our patrons, a Woman's Room and a Customer's Room.

You can do ALL your banking by mail, if you wish

SAULT-SAVINGS-BANK

THE BANK FOR YOU

First State Bank in Cloverland to join the Federal Reserve System

Four-Leaf Clovers

(Continued from Page 16)

stove factories at Ishpeming, rail mills at Ironwood, a mint in Calumet and a candy factory at Menominee—maybe there is in the latter case.

Anyway, since John Connolly and the writer of these lucky lines used to run a dancing school together we hope that he will make mitts for all the Canucks of Chippewa, the Croations of Calumet, the Finns of Franklin and all the Indians, Americans and others in the 15-counties melting pot.

We wear size 8 and need 'em darned bad.

A Couple of Items

(Iron River-Stambaugh Reporter)

"Private Gallup of Gaastra, a member of the Dixie Division, was among the arrivals Sunday."

Private Gallup undoubtedly is a member of the cavalry.

"Miss Myrtle Rock, daughter of Bag-gageman Rock of the Watersmeet-Ashland division, was brought here Monday night and operated on Tuesday for gangeriness appendicitis."

We thought there was something wrong about this till we learned that "gangeriness" is the feminine of "gan-gerine," whatever that is.

Literary Note

Our public library has just "accessioned" a new work, "Old Crow and His Friends."

We looked it over. Maybe there is a second volume coming out. The present one has missed a lot of 'em.

Evil Results of War

The following is a bona fide report of a conversation we got on the street:

High brow citizen meets returned soldier. H. B. C. is one of those idealists who stutter "What magnificent young manhood the American sol-

diers will be when they get home!"

He asks the soldier: "Ah, my boy, what is the one great effect the war had on yourself?"

"Well," responded the soldier, "I was awful fond of stew before I left home."

"Yes, yes, go on," said the high brow.

"Well, I hate it now."

Chance to Wear a Uniform

We never had a chance to wear a uniform during the late war, though the 18 to 45 nearly got us. But we have not given up hope. Some one wished onto us the job of press agenting for the United States Boys' Working Reserve.

And the other day Horatio S. Earle sent us a certificate entitling us to wear a uniform of the reserve, providing we put up \$9.50.

But with the army coming back and all, a man without a uniform is more conspicuous, so we will stick to the mufti.

Make the Punishment Fit the Crime.

We learn from the Herald-Leader that Joseph Wagner of Carbondale, wherever that is, was fined \$18 or something for trapping skunks. If trapping skunks is a crime—we think the man who does it ought to get a crux de gur—he should have been put in the same bag with the game.

And while we are at it let us pay a little more attention to the good old H.-L. We found on page four this "head":

"Young Wife Is Slain by Friend"

It was a good head because it induced us to read the story. And after we got through we had to conclude that the proof reader probably was murdered that afternoon for permitting an extra "R" to linger.

Some Indoor Sports.

"My Wife's at Her Mother's" is an interesting indoor pastime. There (Continued on Page 34)

G. J. Dickison, M. D. W. E. Dickison Geo. J. Dickison, Jr.

GEO. J. DICKISON & SONS

Breeders of

SCOTCH SHORTHORN CATTLE

Herd Sires:

Village Champion, No. 369807

Glenholme Champion No. =122319=

Also

Oxford Down Sheep and Yorkshire Swine

SAULT STE. MARIE, MICHIGAN

Northern State Normal College

MARQUETTE, MICH.

New Buildings Excellent Equipment Splendid Faculty

College Courses leading to A. B. degree

Normal School Courses for teachers of all classes

Special Courses in Art, Music, Manual Training, Home Economics, Kintergarten and Commercial

The school has had more calls for teachers than it can supply.

Write for Information and Bulletin

DORIS I. BOWSON, Secretary

JAMES H. KAYE, President

The Splendid Service and the Great

Harnessed Water Power

OF

The M.&M. LIGHT & TRACTION CO.

have made Menominee the Power City of Cloverland, and Menominee County the best lighted county in the Northwest.

Northeastern Minnesota Is a Land of Certainties

(Continued from Page 21)

northeastern Minnesota land, properly handled, was better than many a gold mine, for he has produced crops of celery and other truck that have brought net returns of from \$500 to \$1,500 per acre. Nor has he been alone in this achievement, for there are many other growers in northeastern Minnesota who have done as well—particularly with celery.

Mr. Hartley began his farming experience some thirty-five years ago on the prairie as a homesteader, but turned to northeastern Minnesota and was one of the first to realize the latent possibilities of the country. He has operated a farm near Duluth, on which he has cleared more than 400 acres, for fifteen years. Eighty miles northwest of that city he has another on which he has cleared 700 acres, 350 of which he has also drained, that he has operated for ten years. He has earned the right to speak of the country.

"There were never in this country," he said in a public address recently, "such opportunities in the agricultural line as today, and farming is now more pleasant and profitable than ever before. There never was a better opportunity for a settler to secure a farm and make a good living from it and if any man in this or any other city is dissatisfied with the price the farmer is asking him for his food or the wages paid him by his employer, the best thing he can do is to get out onto the land and raise his own living."

Northeastern Minnesota is known the country over as the "Land of the Big Red Clover." In the opinion of eminent agricultural experts, nowhere on the globe does clover grow as in that section. Old logging roads along which hay has been toted are everywhere found grown up with a rank tangle of clover, timothy and red top. These are in fact the only weeds that both the northeastern Minnesota farmer. Medium red and alsike clover are usually sown, because the larger clovers become too rank in growth. Single plants up to seven feet in length are not uncommonly found growing wild in the brush, particularly in the burned-over sections where the sun has long had access to the soil.

The usual yield is from two to four tons per acre in two cuttings, and sometimes three cuttings are obtainable in a season. Six tons per acre can frequently be secured. Alsike is a popular clover because of the fine hay it makes and its excellent yield.

Copper Country's Incomparable Climate

(Continued from Page 29)

And the trip on to Copper Harbor is quite as interesting, while the harbor itself with Lake Fanny Hoe and the surrounding hills famous for echoes, produce a scenic effect well worth the trip. The return trip is no less enjoyable; and as we stop for a moment at the top of Quincy Hill to get bird's eye view of the lake towns, we feel that this surely is the "end of a perfect day."

Then there is the trip to Ontonagon, which, when the new highway is completed, will almost equal that to Copper Harbor. And there will be many side trips like that the Canal or the Entry and other places. The climate we already have and the good roads are coming. This combination ought to afford a great source of revenue for the Copper Country.

There should be some organization which would take up this matter and see it through. The boards of supervisors of Houghton and Keweenaw counties would, no doubt, lend their good offices in this behalf, as would also the hotels, garages, merchants, grocers, bankers and business men generally, for all would be benefitted.

At any rate, I am thoroughly convinced that the Copper Country could be made one of the most popular sum-

mer resorts of the country, for it has the one necessary factor, or quality, or attraction, or whatever one wishes to call it, namely, its glorious summer weather with the purest air that may be found anywhere in the wide, wide world. All that is required is the completion of the good roads projects from Houghton to Copper Harbor, Ontonagon, Marquette and the outside world, a good live organization that will advertise broadcast the simple fact that the Copper Country of Michigan has a summer climate that would be a perfect paradise for auto tourists, and at the same time extend a cordial invitation to all to come and share it with us.

Timothy, bluegrass and red-top are also prolific producers. Hay is the most important northeastern Minnesota crop, as it should be. It can be grown at practically no expense. Stump land can be turned into a magnificent pasture by simply removing the heavier brush and seeding on the snow or during any month in the year. If the surface is stirred a trifle with a spring-tooth or other suitable harrow, it will improve the catch. Clover fields in northeastern Minnesota will last without re-seeding as long as the hardiest alfalfa in its native habitat—for clover is native to northeastern Minnesota judging from the manner in which it has pre-empted the country for its own.

There are thousands of acres of fine natural meadows in northeastern Minnesota. These wild meadows can be transformed into fields of tame grass by simply burning over and re-seeding them. Many of the meadows have a luxuriant growth of red-top and blue-joint which in themselves afford excellent pasturage and hay.

Cow peas and other vetches are also found in great variety and abundance throughout northeastern Minnesota, and are usually high in protein value.

There is a big demand for hay in the home markets, the price usually ranging from \$6 to \$20 per ton, though it does not reach the latter figure generally. From \$8 to \$12 per ton for baled hay is a good average price.

There are vast areas in the United States in which the greatest ambition of farmers is to secure a permanent stand of alfalfa, but in northeastern Minnesota, where there has been ample demonstration of the ability of the country to produce this splendid forage crop, it has not received the attention it merits. This is because of the excellent yields and long-lived habit of the various clovers. Alfalfa has been grown successfully in every county of northeastern Minnesota. The Grimm variety, which was developed in Minnesota and has been grown there for over fifty years and which was awarded the grand champion sweepstakes in competition with the world at the National Corn Exposition in Charleston, S. C., in 1913, is the favorite, although there is one field in a southeastern county of the section, originating from common Nebraska seed, that has stood now seven years. Alfalfa does not winter-kill so readily in northeastern Minnesota, owing to the heavy protecting mantle of snow, as on the wind-swept prairie and western deserts where it is chiefly grown.

The appropriation bill for the Michigan College of Mines at Houghton carrying appropriations of \$163,000 for the two-year period, has been introduced by Senator Holmes, according to Lansing advices.

Sparks from a chimney caused a fire that made a wreck of the beautiful Menominee county infirmary at Talbot, Mich. The loss of property and staples is estimated at more than \$20,000, partly covered by insurance.

Welcome Men of the West

THE State of Minnesota extends its greetings and its warm hand of friendship to you. Come and visit with us; learn to know us better and if you like us, come live among us.

Along with our friendship, Minnesota offers you opportunities unexcelled anywhere for grazing sheep and cattle. In the great State of Minnesota, 15,000,000 acres of cut-over land are lying idle. In this vast undeveloped livestock empire, 10,000,000 acres are suitable for sheep and cattle grazing now.

We have a great livestock market—South St. Paul—which is at the very door of Greater Cloverland. Statistics of the South St. Paul yards show 56 per cent increase in the number of Cloverland sheep marketed in 1918 as compared with 1917. Proximity of this livestock market, where good prices rule, and the great saving in freight rates and shrinkage are among the inducements we offer to Western sheep and cattle men.

The broad acreage of northern cut-over timber lands, which Mr. Frank J. Hagenbarth designated "the greatest livestock and dairy country in the United States, if not the world," awaits your inspection.

Come and See for Yourself

For further information write

MINNESOTA STATE BOARD OF IMMIGRATION

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Governor

JULIUS A. SCHMAHL,
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Skidmore Land Company

Farm and Grazing Lands
in Marinette County, Wis.

SKIDMORE LAND COMPANY
MARINETTE, WISCONSIN

*Some of the Best of Cloverland's cut-over
grazing tracts are located in*

IRON COUNTY

In the Heart of Michigan's famous iron belt

When visiting Cloverland do not fail to make a
trip through the Western part of Iron County, and
see for yourself what it offers the new-comer.

For any information or further particulars, write to
the secretary,

Commercial Club

IRON RIVER, MICHIGAN

A Firm Friend of Cloverland

By ROGER M. ANDREWS

CLOVERLAND has a firm friend in C. A. McCann of St. Paul, president of the Northern Michigan Land company, which owns nearly four hundred acres in the famous eastern farm belt of the upper peninsula of Michigan, Schoolcraft, Luce, Mackinac and Chippewa counties.

Mr. McCann's company is operating this year on the most liberal offer to real settlers. To the hustler is offered a genuine opportunity to obtain a fully equipped Cloverland farm which he can have all the time he wants to pay for, provided he will do his share, develop the farm and show the pep from which are made successful settlers in this northern garden of opportunity.

For 18 years Mr. McCann has been studying the colonist problem, chiefly in the west. In 1910 he located 120 Hollanders on Montana farms. They were without money, but a will to work. Mr. McCann loaned them a large sum of money, taking chattel mortgages as his security, and in October, 1912, two years later, every penny had been paid back and every mortgage cancelled.

The McCann plan in northern Michigan is to give the new settler a chance to pay for the land by improving it. He will be provided with 10 acres of cleared land, a house, barn and out buildings, equipped with cattle, horses, pigs and chickens, with necessary farm machinery. He will have the benefit of the advice and help of an experienced local farmer, living near by, and the officers of the company will help him instead of squeezing him dry. Mr. McCann has placed \$250,000 with two trustee



C. A. McCann, President

banks, and this money cannot be used for any other purpose than as a development fund to help the new farmer over the first few years.

These great agricultural counties of the eastern part of Cloverland offer an unusual opportunity for the new-comer. They are being rapidly settled, have good schools, roads, a cash market for all the garden and farm produce that can be raised, and are in the most rapidly growing part of Michigan.

Mr. McCann is on record as saying: "If those who take advantage of our offer will work as hard in Michigan's garden of opportunity as they do in drudging away their lives for wages, their worries will be over and their future assured. This is the new farmer's opportunity and 1919 is the new farmer's year."

FOR SALE—120 acres 6 miles from Sault Ste. Marie, 80 acres under cultivation and 40 acres sheep ranch with nice flock of sheep. Also have a good herd of cattle with 7 milch and 7 horses. Will sell with or without stock. Good loam soil, very productive for all kinds of hay, grain and vegetables. Grows fine strawberries. Fine large house, furnace heated, with basement. Also good barn with basement and other good buildings. Will give particulars of size of buildings, etc., on request to parties wanting to buy. Live

on good county road, daily mail and phone in house. This farm is in good condition. Can give clear deed and good terms. A. T. EAGLE, Sault Ste. Marie, Mich., Kelden Star Route.

WANTED—To rent a good size improved farm. Must be A-1 land, have good buildings, on good roads and close to market. Cash basis. Write C. V. M. care Cloverland Magazine, Menominee, Michigan.

Two Real Opportunities

On account of other interests I will sell my ranch properties in the Clover Belt of Wisconsin, two miles from railroad stations, partially improved. Small payment down, long time at low interest. Or will sell half interest to responsible parties who will take charge.

The ranch in Barron County contains 2,400 acres, 2,000 acres of it under seven-barb wire fence, surrounded by beautiful farms, and not over half a mile from two railroad towns. Can have own sidetrack if wanted. There are no buildings.

The other ranch has 6500 acres and lies two miles south of Stone Lake, Wis., in Washburn county. Would sell all or part. The new State National Highway is laid out along the north line for six miles. We have one concrete barn with steel roof 100x20 ft.; one stuccoed barn 40x60 ft. with steel roof. Solid concrete silo 40 ft. high. Stuccoed house, with full cellar, screened porches, nine rooms. Chicken house, individual hog houses, corn cribs, machine shed, etc. The men who have the farm leased state they had 160 acres in crop last year, but not all stumped. About 1000 acres are in pasture, fenced. Most of this land is high and rolling. The farm is leased for four years but if some party bought it I would agree to arrange the lease so that they could have possession within sixty days. Address—

R. L. RUDDICK

219 Fifth Street, North

MINNEAPOLIS, MINN.

Lemons in Cloverland

THE Manigold Company, Limited, of Carlshend, Marquette county, Michigan, is conducting interesting and successful experiments in indoor culture of fruits, vegetables and flowers. The company boasts that it raises larger and better lemons than are grown in California, and points to a little lemon tree just 22 inches high that produces lemons weighing one pound each. One such lemon was recently plucked from the tree and there are six smaller ones now developing. Next year the company will try raising oranges. The company also has tomato vines with green and ripe tomatoes on them the year round.

This experimenting has not ended with indoor accomplishments, but has extended into real gardens in the summer time. The company always raises two garden crops, one in the spring and one in the fall. Beautiful flowering sweet pea vines have been cultured until they grow to be more than

ten feet tall, and other ornamental plants are nurtured to similar proportions. On Jan. 15, this year, the company had on exhibition red lilies eight inches in diameter, and an exceptionally fine display of callas, geraniums and other potted plants, all in full bloom, in their store. Later on the company will have sheets of petunia blossoms so thick that the green leaves can not be seen, for it has attained this fine growth of these pretty flowers in former years and there is no reason to doubt that it will do the same this year.

In all, these horticultural endeavors are highly interesting and they have demonstrated that many vegetables can be profitably grown in Cloverland that are supposed to be adapted only to southern climates, and the company also has introduced the beauties of nature to the northern-most limits of Cloverland.



Ten-horse hitch used on large farms in middle west.

PLEASANT VALLEY FARM FOR SALE

No state or nation ever developed a more productive or beautiful farm than this.

Three miles from the commercial and industrial cities of Menominee, Mich., and Marinette, Wis., having a combined population of 35,000 people.

Five hundred and twenty acres of Cloverland's richest soil—all in one piece and cleared, with the exception of about 15 or 20 acres of hardwood timber.

Thirty-five head of fine Holstein cattle — all young stock — pigs, chickens, turkeys, etc.

All agricultural implements one could ask for go with this sale.

Two large basement barns, sheds for all purposes, big house—buildings shown on page six of last month's Cloverland.

We also have several thousand acres of A No. 1 cut-over land in Upper Michigan and Wisconsin. These lands are UNEXCELLED for farming and grazing purposes.

Write for details, descriptions and prices

**SAWYER GOODMAN COMPANY
JAMES B. GOODMAN CO.**

Marinette, Wisconsin

GOODMAN LUMBER CO., Goodman, Wis.

What the

I. Stephenson Company Trustees

WELLS, MICHIGAN

Offer to Homeseekers on the Sunny Side of Cloverland, the Upper Peninsula of Michigan

Choice of 400,000 acres of land at prices ranging from \$20 to \$30 an acre for cut-over land.

A climate the same as upper New York, northern South Dakota and central Minnesota—this district is 600 miles south of the much advertised wheat belt of Canada.

A variety of soils fit for all crops grown in the north temperate zone.

Good roads, good schools, good water and climate.

Home markets that now are forced to depend on outside communities for much of their food.

Railroad service that brings 10,000,000 people within a night's ride for farm products, and the equal of that afforded the farmers of Indiana, Illinois and Iowa.

Fruit, Dairying and Live Stock, Truck Gardening, Grains, Root Crops

An unsurpassed fruit country, protected by 1,000 miles of shore line along Lakes Michigan and Superior — a practical insurance against frost damage. A choice of five lines of farming.

LUMBER ALL KINDS ALL SIZES

MANUFACTURERS

INTERIOR and EXTERIOR FINISH

Distributors of
Beaver Board
Glass
Certain-teed
Roofing

Owners of the Only Modern
Dry Kiln in This Section.

Mail Orders Our Specialty

LOCK CITY MANUFACTURING CO.
SAULT STE. MARIE, MICHIGAN

The Good Old Times?

There were none—they're here now

THERE are more opportunities for men with ready money today than ever before. **READY MONEY** comes only with **STEADY SAVING**. You have the **MONEY**, we have the **BANK**.

CENTRAL SAVINGS BANK

CAPITAL and SURPLUS \$120,000

J. L. Lipsett, President C. E. Ainsworth, Vice President
A. Wesley Clarke, Cashier C. W. Swart, Assistant Cashier
T. George Bailey, Assistant Cashier

SAULT STE. MARIE, MICH.

The Keweenaw Land Association Ltd.

— OFFERS —

Cutover Lands

IN

Chippewa, Gogebic,
Dickinson, Houghton and
Iron, Ontonagon

Counties in the Upper Peninsula of
Michigan in tracts to suit

Clay loam, sandy clay loam, sand loam and sand
soils at \$5.00 to \$15.00 per acre.
Generally well watered.

D. S. DEAN,
TREASURER
87 Milk St., Boston, Mass.

J. M. LONGYEAR,
AGENT
MARQUETTE, MICH.

When writing to advertisers, please mention the Cloverland Magazine.

THE MINERS' NATIONAL BANK

ISHPEMING, MICHIGAN

OFFICERS:

M. M. Duncan, President W. H. Johnston, Vice-President
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Choice Cut-Over Hardwood Lands

Especially adapted to grazing and general farming, located on trunk line railways twelve hours from Chicago markets. For sale, in small or large lots, at reasonable prices, terms to suit purchasers. For particulars write

The Northwestern Cooperage & Lumber Co.
GLADSTONE, MICHIGAN

Fifty-five Years Old

(Continued from Page 15)

States government and it has since continued as such. Its field is an extensive one, extending far beyond the county, and its connections are unusually strong.

The bank was established January 22, 1864, with prominent Marquette county men, including the late Peter White, among its officers, and it proceeded at once to become a vital factor in the upbuilding of the then village of Marquette, the county and the district. From that day to this it has had a record of continuous growth and expanding activities. It saw all the storms and flurries of the early days, and did business as usual. It experienced financial panics that wrecked many banks, and came through them

unscratched and with undiminished strength. Its fifty-fifth birthday finds it on the eve of new progress and new accomplishments.

The First National, which is one of the oldest financial institutions in the upper peninsula, originally had a capital stock of \$50,000. This has been increased from time to time until now it stands at \$150,000, with a surplus of \$100,000 and undivided profits of \$50,000. Its total resources now stand at over \$3,000,000.

Of all the long chapters of achievement to the credit of the bank its officers take more pride in its part in the great financial operations by the government during the past year than in anything else. Its resources and the size of the city considered, its record will stand comparison with any to the credit of an American national bank.

Four-Leaf Clovers

(Continued from Page 30)

should be at least five players and never more than seven at the outside.

The man whose wife has gone away for a night sends a cautious invitation to five or six friends to come around that night for a couple of hours or so. Each of these is expected before he arrives to have won at least one match of "Save a Life," to entitle him to admission. After that the pastime resembles a whole lot the old fashioned game of draw.

At our house "Clean the Cellar" is a popular pastime. It is more a violent exercise than a game. The stake is a quiet evening and to win this you have to be very thorough, especially in the corners.

A variant on "Blindman's Buff" and "Button, Button, Who's Got the Button?" is also proving popular. The object of this game is to locate a man with a well stocked basement. After that he's "It."

In the foregoing innocent ways the irksome cessation of the ordinary

amusements is rendered less tedious. But if you want to have an endless source of excitement try to teach your wife to play pinochle.

A survey of conditions at the St. Paul docks at Escanaba was made by officials of the road and the Escanaba Traction company looking to a change from steam to electric power. It is claimed that a considerable saving can be effected by the use of electricity for certain work done by steam power and it is understood that arrangements have practically been completed for making the change.

The Calumet and Hecla and subsidiary mines will work only three-quarters time because a large surplus of refined copper for which there is said to be no market and because of the uncertainty of the future. Twelve thousand men are affected. It is probable that other copper companies will also reduce working time.

Gogebic County Chapter of the Red Cross has been advised by the headquarters at Chicago that service badges are to be issued to the workers.

For Sheep and Cattle Ranches

Write to

GRIMMER LAND CO.
MARINETTE, WISCONSIN

Owners of a large acreage in Cloverland

The Harmon Shorthorns

HERD BULL COLLYNIE CULLEN 5TH 562994

He is a grandson of Avondale and one of the good bulls of the breed. He heads a select collection of matrons and my aim is to produce the kind of cattle that will make good.

Am offering for sale two young bulls and can spare a few females that are safe in calf to the service of this great bull.

Write for prices or come and inspect my herd.

Cattle tuberculin tested.

LOUIS HARMON

Cornell

Delta County

Michigan

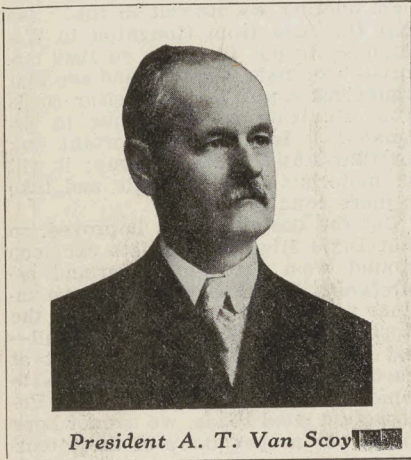
Milwaukee Organized Work During 1918

(Continued from Page 23)

involving the efficiency of the country as a war waging power.

The Milwaukee Association of Commerce readily adapted itself into a war aid organization and became a loyal and aggressive co-worker in the nation's great cause.

It would require more time than is allotted to me here to enumerate the splendid war service rendered by this Association during the year just closed. I can only point to a few of the larger undertakings engaged in. When the war department decided to establish a Motor Training School in Milwaukee, involving an initial investment of over \$100,000 and an operation turnover of \$300,000, it turned to the Association of Commerce as the logical and competent body to undertake the task. All the conditions and plans exacted by the government were completed when the armistice brought the project to a halt.



President A. T. Van Scoy

When the government of France concluded to send the Paris Symphony orchestra on a tour through the United States in the interest of the French Red Cross, it asked the commercial bodies of the various cities to finance the project. The Association of Commerce served in that capacity for Milwaukee and thus enabled its citizenship to help a great humanitarian cause and at the same time enjoy a rare musical treat.

Many other instances might be recited in which the association co-operated with the government agencies, such as disseminating instructions on enemy aliens, the draft registration, industrial deferred classifications, active participation in Liberty Loan and Red Cross campaigns and various other war aid activities.

In view of the fact that we are deeply concerned in the development and prosperity of the great commonwealth in which we live, it is most gratifying to have present at his gathering the members of the Wisconsin Development association.

These men have done much for the material progress of the state, and

we are honored in their presence here tonight.

The suggestion has been made that through some plan a closer amalgamation of the two organizations be perfected and "Barkis is willin", and there seems to be no paternal or other serious objections, except that thus far the question of dowry and adjustment of authority has not been worked out fully, but, as in all other affairs of the heart, some satisfactory arrangement will, no doubt, be perfected.

During the year the name of the organization was changed to Association of Commerce, new quarters were secured and a broader field of activities was entered upon. With the pressure that has been placed upon the association for an extension of its services more room must be secured. While we now practically occupy the entire second floor of this building we find that we have outgrown the same and are negotiating for more room on the ground floor in which we shall house two of our bureaus.

Among other new efforts initiated during the year is that of the committee on agriculture and state development that has organized several sub-committees and is bending all its energies toward the development of our uncultivated lands in the central and northern part of the state, and in promoting a closer co-operation between Milwaukee and the rest of the state, having in mind that close co-operation and pleasant business and personal relations are mutually desirable and beneficial.

The Association's successful efforts are made possible only by the loyal response of the membership. Every call for active support has received a ready response. The various committees fulfilled every duty that was assigned to them promptly and efficiently, and the board of directors has given liberally of its thought and time in solving the important problems which confronted that body. Among the executive officers, directors and members were also many who have given a greater part of their year's time to the service of the government, without compensation or thought of gain.

In closing I desire to express my personal gratitude to the membership and to my associates on the board of directors for their patience, assistance and co-operation which have been so generously extended, and which made possible what success I may have had as your president.

Our annual program has been designed to visualize the essentials of a modern commercial body, whose membership must in a greater degree than ever before, dedicate its services to community progress and public welfare; having in mind that all we may do in that direction contributes materially to the prosperity and uplift of the Queen City of the Lakes—Milwaukee.

Thousands of Acres

of the very best Farming and Grazing Lands in Cloverland

We have cut the hardwood timber off and grass is growing thick on these idle lands.

We cannot use them now that the timber is removed.

Farmers, Ranchmen, come and see us. We can show you great opportunities. From one section to a solid township, all wild land, or with buildings and cleared land. All well located.

Write stating size tract needed

Wisconsin Land & Lumber Co.

HERMANSVILLE, MICHIGAN

THE UPPER PENINSULA OF MICHIGAN

affords unparalleled opportunities to grazers. This region is more widely known as Cloverland and that name is synonymous with actual conditions.

ALGER COUNTY

is located in the heart of Cloverland and has a large acreage of undeveloped land.

THE FIRST NATIONAL BANK OF ALGER COUNTY

is located at the county seat in the city of Munising. It is a progressive institution with capital, surplus and undivided profits of \$120,000. Any inquiries addressed to this bank will receive prompt and careful attention, and correspondence is invited.

WORRELL CLARKSON,
President

FRED W. YOUNG,
Vice President

H. R. JOHNSON,
Secretary

THE CLARKSON COAL AND DOCK CO.

SHIPPING DOCKS
DULUTH and ASHLAND

MERCHANT'S NATIONAL BANK BUILDING
ST. PAUL, MINN.

(Continued from Page 22)

total up to \$6,000. Multiply this by the assertion of Fred S. Case, the able chairman of the highways transport committee, that if we get a proper system of good highways in the Upper Peninsula we should have 100,000 visitors each summer—and we see that up until now we are hardly skimming the surface.

A striking statement by a Wayne county commissioner, and backed up by the judgment of the Marquette county road commissioner, is that increased tourist travel in Michigan, using automobiles on the highways, would in four years provide a net profit to repay the entire \$50,000,000 outlay by the state.

The time will come, government officials predict, when railroads will be used almost exclusively for long-distance movement, and the minimum limit will be several hundred miles. All light traffic for lesser distance, they predict, will be by motor truck. This is just as true of passenger, tourist, traffic as of freight.

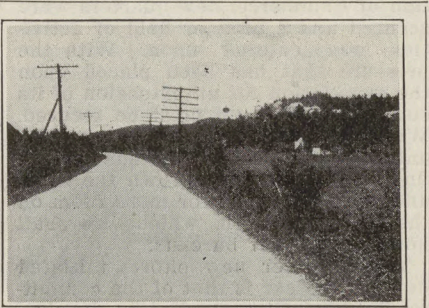
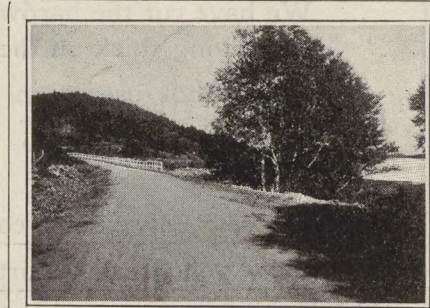
We are planning for settlers up here; ranchers; we're asking them to come. Good roads will give us twice the argument to offer to an up-to-date rancher, accustomed to using his automobile over wide distances in Texas, Arizona, Utah, Wyoming and Montana—states from which ranchers are coming to Cloverland.

In food saving, too, consider Herbert Hoover. He says that for the world's food needs, our highways development commands all the support of which we are capable. He says: "Another of the uses of a perfected highways system would be to cut down the waste of perishable foods. Fifty per cent of our perishables never reach the consumer. We lose forty to sixty per cent of our potatoes yearly. Not only is the production area of our perishables congested, but in general the producers are too remote from the markets.

"Besides stopping this waste," Hoover says, "a highly developed rural express would work to lower prices. Europe has an intimate system of delivery lines to transport the products to nearby markets. Where the rural express has been developed in this country it has operated to these ends.

"I should say that failure of public markets in this country is due to this tremendous loss of perishables, shipped from remote distances. A network of rural delivery would provide the economic basis for a successful public market."

We in Marquette know what high prices mean, in milk, eggs, and farm produce. We realize little of the saving which could be made with a highway network available to every farmer.



The United States plans to put a vast fleet of army trucks into service, in mail, parcel post, and freight hauling work. You, gentlemen, know what those trucks will do to a poor road. And no one in the United States can know how much they may do for America, and for the Upper Peninsula, on good roads.

Government officials calculate that with good highways, motor trucks and passenger automobiles can carry approximately 200 per cent more freight than the railroads. That applies still more strongly in Cloverland.

Combined forces of the government, Franklin K. Lane, secretary of the interior, tied the highways development onto his plan for putting millions of returned soldiers and their families on farms. "These centers," he says, "must be developed and tied together and made easy of access by good roads, over which the most efficient transports will move goods to market."

While we are waiting for Michigan to appropriate the \$50,000,000 bond issue for highways, there is much that we can do now. I can't pretend to tell you road-builders how to do your work—I wouldn't try—but there are some general suggestions applying to Cloverland that are worth rehearsing:

Colorado has built a Pike's Peak auto highway that offers some suggestions for our scenic, tourist, roads in the Upper Peninsula. It is called the highest and most wonderful of all the earth's motor roads, taking the tourist in sweeping curves up above the clouds to look over half the state. The Upper Peninsula can show scenery which in its own way compares with the Pike's Peak road.

Their road has wide pull-outs, and double-track width all the way. Their average grade never runs more than six per cent; all the curves are extra wide and banked; masonry parapets guard the bad curves. Surface ditches run continuously on the upper side wherever the road takes a hillside. Local and long-distance telephone stations are located at convenient points. Each mile, with its elevation, is marked.

That is an unusual case; we have suggestions for the ordinary roads of the Upper Peninsula: Put a sign-post on every cross-road, regardless of where the roads lead to. Get the connecting links completed. I am quoting Mr. Rowell on this. See that the road from Houghton to Watersmeet is put in shape so that motorists can make the loop and see that wonderful country. Get better roads from Munising to Manistique to Escanaba; it is a most important link for Cloverland's touring fame; it will let motorists go in a circle and take in more country.

Get the eastern roads improved, so that Dixie Highway tourists can loop around west through Cloverland before going back. If we can't have another north-south trail up through the Upper Peninsula, a Superior trail—and we should have it—we must at least make it attractive to tourists to come west from the Dixie road. Until we get good roads, we cannot hope to get our proper share of these tourists.

Get out service maps for autoists, say every two weeks during the summer. (Continued on page 38)

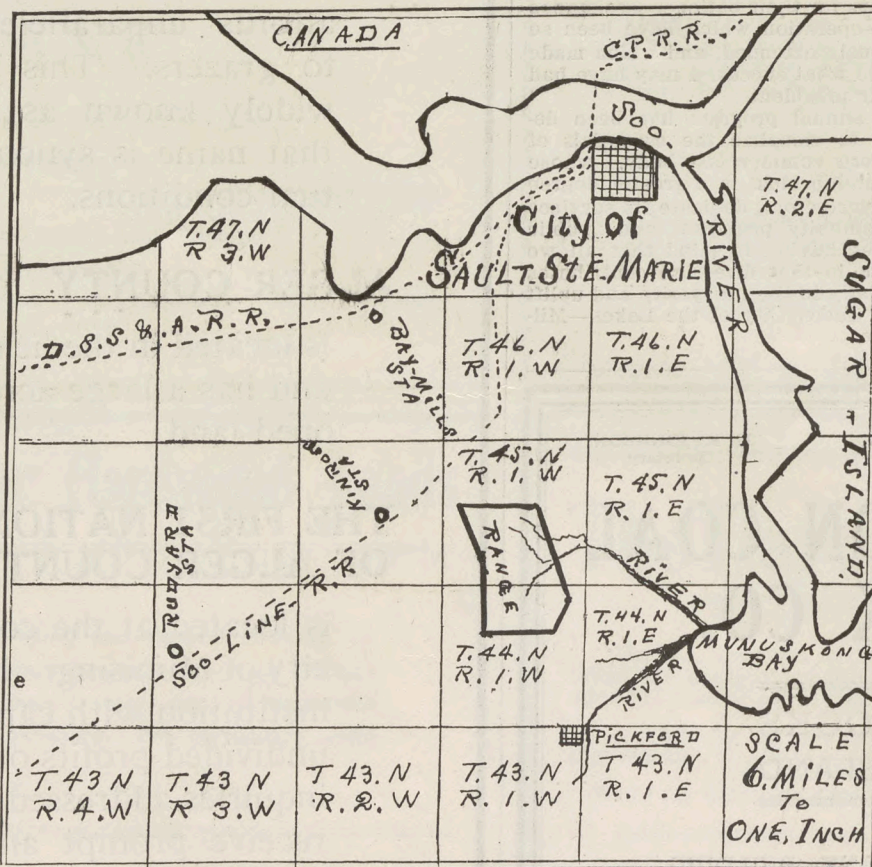
Cloverland Cut-Over Lands For Sale

ESPECIALLY SUITABLE FOR SHEEP GRAZING

SITUATED in Eastern Chippewa County in Towns 44 and 45 N. R. 1 W. See map.

RANGES can be had in size 2,500 to 10,000 acres; the property is surrounded by a thickly populated and prosperous farming community, the greatest timothy and clover producing territory in the country, grown on Chippewa's Famous Clay Belt.

THE SOIL is of lake washed sandy loam and variable clay sub-soil. County Agricultural Agent's report can be had on request; lands topographically high to west and low to the east. Small lake on highland, streams on low land. Good roads, telephone and electric power lines on and adjacent to lands. For information write:



PENINSULA BARK & LUMBER CO., SAULT STE. MARIE, MICHIGAN

The Delta

The Leading Hotel of
ESCANABA

Fire-proof and up-to-date in every way.
Cafe and Lunch Room in connection.

WISCONSIN HOTEL CO., Props
A. N. Merritt, Mgr. Escanaba, Mich.

SEEDS



OLDS' Catalog TELLS THE TRUTH

With carefully written descriptions, true illustrations and conservative statements, Olds' 1919 Catalog is a true guide and a most valuable book for everyone needing seeds.

OLDS' SPECIALTIES

Seed Potatoes. The new Olds' White Beauty and 10 others, choice certified stock. Seed Corn—Wisconsin fancy ear corn. Seed Oats, Wheat, Barley, Clover, Alfalfa, Timothy, Wisconsin tested, high-grade seed. Samples FREE, all field seeds. Buy from samples. Garden Seeds, Flower Seeds, Bulbs, Nursery Stock, Poultry Supplies, Tools, etc.

Write today for Olds' 32nd Annual Catalog
L. L. Olds Seed Co. Madison, Wis.

WANTED—500 to 1,000 breeding ewes on shares on five year contract. Best of real estate security will be given as guarantee of lessor's share. Sheep to be delivered October 1, 1919, etc.

W. A. GROVER
RIDGELAND, WIS.

San Angelo, Texas
January 18, 1919.

Mr. J. A. Doelle, Manager,
Upper Peninsula Development Bureau,
Marquette, Michigan,

Dear Mr. Doelle:-

I have both of your letters of the 4th and 6th. Will say, you have my permission to use anything I have said for "Cloverland" in your advertising, for I really have never expressed myself as I could, in telling of the advantages and good things for that country.

Was just talking with a ranchman here, who has lands, leased and owned, to the amount of 72 sections, and has 2400 head of cattle on this land, and they are doing well to keep alive. This man, D. K. McMullan, is coming to Cloverland in the spring and will be quite an asset to that country, and he is very enthusiastic over that country. He is getting your advertisements. I have lost pretty heavily on my sheep in New Mexic and I hope to make it back this year in Cloverland. The drought in New Mexico and Texas has gotten the best of many a stock man but I never expect to try to graze in an uncertain country. Cloverland looks like the SURE thing to me.

There is no doubt but what there will be several thousand sheep up there this year, and something should be done as to getting a shearing crew up in that country. It would be well for the Bureau to see what could be done along that line.

With kindest regards, I am,

Yours sincerely,

A. J. Basel (Signed)

"If Thou Seekest a Beautiful Peninsula, Look Around"

This compelling invitation is a part of the Great Seal of the State of Michigan, and today it is a thousand times more true than when it was adopted by the founders of Michigan, more than eighty years ago.

Michigan is not merely a state, she is an empire. Today, with the greatness of her agricultural and livestock opportunities, commanding nation, if not world, wide attention, Michigan is an empire of opportunity.

There is at this moment plenty of splendid acreage, plenty of clover and water, plenty of former timber land, plenty of rich areas at the lowest figure today in America for good grazing lands (with generous offers of free trial and inviting lease-options from the present owners), in the northern half of the lower peninsula and the entire upper peninsula of this great state.

Michigan is the largest state, except Georgia, east of the Mississippi, and within the rich borders of her northern counties was born the Cloverland idea, based upon the opinion of Frank J. Hagenbarth, of Utah, president of the National Wool Growers' Association, that here was indeed: "The greatest dairy and livestock section in the United States, if not in the world."

The Public Domain Commission of Michigan, created to foster and promote the land, timber, soil and water resources of the state, heartily joins the commercial and advancement associations now doing such splendid service for all concerned, resident and new-comer alike, in extending to the man who wants a chance, under the best conditions on earth, to farm or raise livestock to come and see for himself what Michigan has to offer in this "back to the land" year of 1919.

The Public Domain Commission of Michigan:

WILLIAM KELLY,
Chairman, Member Board of Control
College of Mines.

JUNIUS E. BEAL,
Board of Regents, University of
Michigan.

FRED L. KEELER,
Superintendent of Public Instruction

COLEMAN C. VAUGHAN,
Secretary of State.

ORAMEL B. FULLER,
Auditor General.

WILLIAM H. WALLACE,
State Board of Agriculture.

GEORGE L. LUSK,
Secretary Commission and Commissioner of Immigration.

(Continued from Page 36)

mer, like weather maps. The Development Bureau will make the maps if the county road engineers will keep us informed on the condition of their roads. The same thing applies to fishing information.

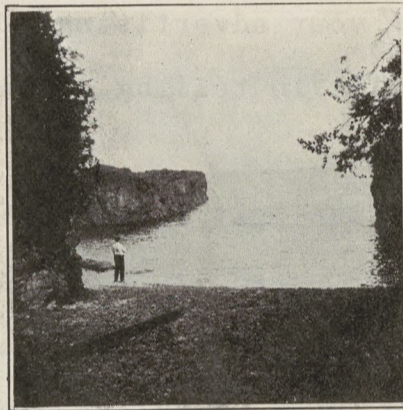
Go after your counties to set aside public camping sites or the camping tourists—they are coming in increasing numbers. Few counties have done this; Marquette is one of them and Ontonagon the other.

Go after the hotel and garage men in your counties to organize for taking care of tourists.

Get the main roads marked with a clover leaf, indicating to the tourist that he is on the main road leading to a guide sign. Supplementary to these, have sign boards at every junction of main roads. The guide signs, the clover leaf, and our road-weather maps, will take the tourist anywhere.

Mr. Van Pelta has given me the text for the advice on road building, when he says: "Some think too much in terms of first cost and not enough in terms of ultimate cost. We try to skim through on the least possible expenditure, and that means trouble."

In places and conditions where we can't have a fine road, let's start it.



At the end of a touring day.

anyway. Pick the route, the grades, and lay the foundation for the ultimate perfect road when the state provided that \$50,000,000; and use that foundation as a dirt road—any kind of road—kept in shape by systematic dragging, until we can put on the hard surface. Upkeep is the main thing, anyway. Experience shows that even a dirt road can be improved by oiling, and kept in shape by systematic attention. And in the future when the money comes—

Paving adds two miles to a gallon of gasoline, over a good gravel road. That is something tourists are coming to consider.

The 1918 Champions

Page six of the January issue of the Cloverland Magazine contained a very remarkable photograph of the Grand Champion carload of steers bred and raised in Texas, fed in Illinois and which won first honors at the great 1918 International Livestock show in Chicago in December.

By an entirely unintentional oversight the fact was omitted that this champion aggregation was born and bred upon the famous S. M. S. ranch of the Swenson brothers at Stamford, in Jones county, Texas, of which F. S. Hastings is manager and A. J. Swenson is superintendent. These expert cattle men were able to produce a herd of cattle taken from their ordinary commercial carload product which won over all ages and breeds in the great Chicago International livestock test. This is, indeed, an achievement of which the S. M. S. ranch may be proud. These champions were bought by J. W. Frazier of Illinois, fed by him on his Illinois ranch and exhibited under his direction in Chicago. Cloverland Magazine congratulates the S. M. S. ranch and Mr. Frazier on their well earned success.

Judge Flannigan assessed Delta county violators of the liquor laws a total of \$1,300 in fines.

5000 MILES



THE MIGHTY AMAZON

Special Sale of Tire Mileage

Buy your tire mileage at the lowest market price, by using Amazon Supertires!

The combination of reinforced carcass strength and a long-wearing tread of a fine grained, velvety texture is absolute assurance of mileage far in excess of the guarantee of 5000 miles!

A satisfied customer is always a permanent one, and we pride ourselves on the fact that very, very few tire users ever change from Amazon.

WHY DON'T YOU TRY ONE?

Cloverland Distributors: NORTHERN HARDWARE AND SUPPLY COMPANY, Menominee, Michigan. Cloverland Dealers! Write us for agency proposition. Ask your dealer about Amazon Supertires.

A Missouri Farmer Calls Wisconsin's Bluff (?)

DEVELOPING eighty acres of cut-over land seven miles east of Hayward, Wis., upon which there is hardly an idle acre or scarcely any in cultivated crops, is the unusual farming experience of Charles W. Marple. He wrote the Wisconsin state immigration bureau in 1914 from La Plata, Missouri, inquiring about the possibilities for sheep production in the upper counties. Without previous experience in sheep raising Mr. Marple moved on his place in March of that year, built a shanty, ran a fire over his tract, sowed alsike and timothy on most of the farm, cut brush, fenced and cross-fenced with woven and barbed wire. As rapidly as the brush was removed he sowed grass seed.

This piece of land contained the usual amount of rubbish, down stuff, windfalls, cradle knolls and slashing. Contrary to the usual practice, he kept on cutting brush during the winter, and when the snow disappeared in the spring he sowed grass seed. By his industrious effort he had quite an opening in good hay between the stumps the following summer. Building a rough hay shed and barn, he bought eighty-two ewes, native grade Shropshires, and a pure-bred Shropshire ram.

In 1916 he received \$245 for wool and \$210 for lambs, with no outlay for feed. In 1917 he lost twenty-five lambs by not applying a simple remedy at a critical time, but came out with \$475 to the good from the sale of wool and lambs after reserving all young ewes for breeding purposes. He now had a flock of 150 females, 100 of which will have lambs this spring. He would not part with these for less than \$20 each, in fact, they are not for sale.

After deducting the cost of original foundation stock, he claims a balance of \$3,400 for the three years he has been in the sheep business, and his farm has also increased in value. Mr. Marple declares the sheep have done excellent work in keeping down the underbrush, almost as effectively as a hired man during the summer months.

When he began his operations every acre was covered with more or less brush. Now it has been greatly reduced. Forty acres are free from brush and in clover to be cut for hay, and a good growth of tame grass is making its way on the rest of the place. Last winter he bought ruta-bagas, and feeling that he cannot afford to be without them, he is preparing a tract of ground to grow a supply for next winter, and also has purchased an adjoining eighty acres to enlarge his operations. He has not been troubled with coyotes or dogs.

His land is no better than found in many other parts of the upper country, and what he has accomplished should be an inspiration to anyone who likes sheep and is willing to follow the suggestions of the Wisconsin state experiment station, supplemented by his own good judgment.

Experience gained through years of stern service in landing the steamer Maywood at the Stonington dock when stiff gales swept Green bay and Little Bay de Noc secured for Lieut. Charles McCauley, Sr., of Escanaba, the first promotion gained by him in the United States navy. Incidentally, it was the fortune of Lieut. McCauley on his first trip to France, as navigating officer aboard a mine carrier, to meet the Maywood, now torpedo boat chaser No. 104, owned by the French government, off the port of Brest.

A new drink has made its appearance in Michigan since the state went dry. It is known as "Honey Syrup" and is said to be composed of rain water, honey, brown syrup and yeast cakes and contains nearly seven per cent alcohol. It is described as being very sweet and smooth while being imbibed, but the "kick" comes a little later.

Angus McGillis, of Escanaba, 19 years old, just discharged from the army, fell from a pier and was drowned in the Menominee river near Iron Mountain.

First National Bank of Iron Mountain

Iron Mountain, Michigan
Resources Over \$1,600,000.00

Officers:

E. F. Brown, President
J. C. Kimberly, Vice President
R. S. Powell, Cashier
F. J. Oliver, Asst. Cashier

Directors:

The President, Vice President, Cashier, and W. H. Scandling, A. Bjorkman, W. J. Cudlip and R. W. Pierce, Jr.

Chatham-Trenary Land Co.

25,000 Acres First Class Farming and Grazing Lands for Sale in Chatham-Trenary District. From One Section to Five Solid Body.

Office: Marquette National Bank Bldg., Marquette, Mich.

Cut-Over Grazing and Farming Lands in Four Cloverland Counties

Tracts from one section to twenty. If desired can include some cleared and improved property. Write us stating size of tract desired.

VAN ORDEN BROS.
HOUGHTON "Cloverland" MICHIGAN

GEORGE M. MASHEK

ESCANABA, MICHIGAN

November 29, 1918.

Upper Peninsula Development Bureau,
Marquette, Michigan.

Gentlemen:—

During this year you have asked me to report to you my results in cattle grazing. Hence, this letter of today.

On March 26 I bought from a St. Paul, Minn., speculator 127 head of very common steers, having an extra large fill and averaging 623 pounds. They cost an average of \$52.21 per head, or 8½ cents per pound. I shipped them to Watson, Cloverland, where they arrived March 28. They were run on average cut-over land which had not been seeded. They were never fed, and I paid very little attention to them.

I shipped them to the Chicago market November 1, where they sold at 10 3/10 cents per pound. They averaged 911 pounds in weight, and brought an average of \$93.48 per head.

My net profit was \$34.27 per head, with deductions made on freight charges from St. Paul here, and from here to St. Paul, as well as a labor charge of \$4.00 per head. My total net profit on the 127 head was \$4,352.29.

The better grade of steers—20 in number—weighed 750 pounds when bought. They showed much the better gains, and my profit on them was \$60 per head. Hence, I believe in buying better grade of stock for grazing for the market.

I am glad again to endorse Cloverland as a grazing region. I have tested it with sheep and cattle, and am convinced that it is an ideal place for both. You are welcome to use this letter as you see fit.

Respectfully yours,

GEORGE M. MASHEK.

When writing to advertisers, please mention the Cloverland Magazine.

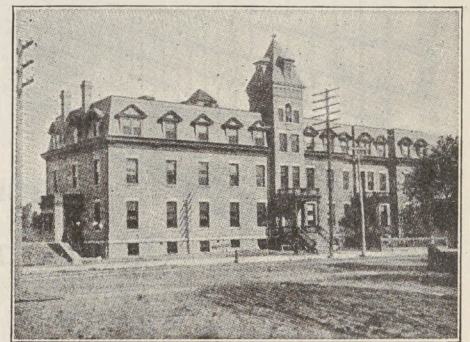
Become a Trained Nurse

and receive pay while you are in the training school

St. Joseph's Hospital

Menominee, Michigan

One of the largest and best equipped hospitals in the Northwest,



offers a three-year training school course for nurses, admitting to registration in Michigan and Wisconsin, and including a complete course in training under the supervision of competent instructors and a corps of physicians.

A splendid opportunity for young women of Northern Michigan and Wisconsin to become trained nurses without the necessity and undesirable features of going a long distance from home. Open only to young women of good character, High School graduates or two years' High School work. This Training School is non-sectarian. Applications invited from young women between the ages of 19 and 35.

For circular, application blanks and full information, address,

SUPERINTENDENT OF NURSES,
St. Joseph's Hospital Training School,
Menominee, Michigan.

Opportunity

In the Great Iron Mining Section of the Upper Peninsula of Michigan.

We have cut-over lands suitable for grazing or farming for sale and lease at a low cost and on easy terms

Come and visit our town of

ALPHA

The Town of Industry in the Heart of the Iron Mining District.

The Nevada Land Co.

Iron County ALPHA Michigan

Modern Methods in a Modern Mill

By WILLIAM PARIS POTTER

ABOUT one year ago the Northern Sawmill Company purchased the interests of the Sagola Lumber Company, a lumber business which was established nearly fifty years ago. It was burned out in 1911, but quickly rebuilt. During the past few months it has undergone extensive repairs and improvements, and is now ready to handle the business of the logging season. A new planing mill is also being built, in connection with the sawmill.

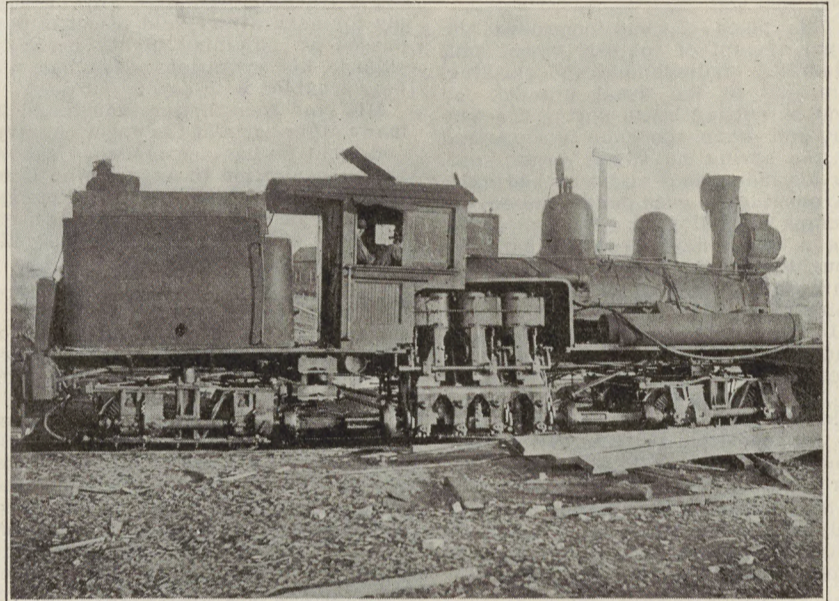
The mill now has in operation three new 150 horsepower boilers running one 300 horsepower engine. Also one 25 horsepower engine which runs the electric light generator to furnish electricity for the mill and Sagola.

It is a double-hand mill. The lumber is conveyed from the mill to the yards on trucks drawn by horses over elevated plank tramways, probably about ten feet in height, where it is piled ready for shipment.

The slab wood from the yards is sold to home and outside consumers at a good price.

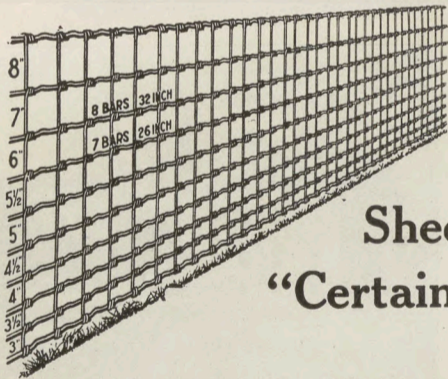
Two hundred men are employed in the logging camps and at the mill. The total yearly output averages 13,000,000 feet of sawed lumber, mostly hardwood: viz., hard maple, birch, beech, elm, hemlock, basswood and cedar. Norway pine and white pine are nearly all gone. There are today

(Continued on Page 44)



Type of engine used by Northern Lumber Company of Sagola, Mich.

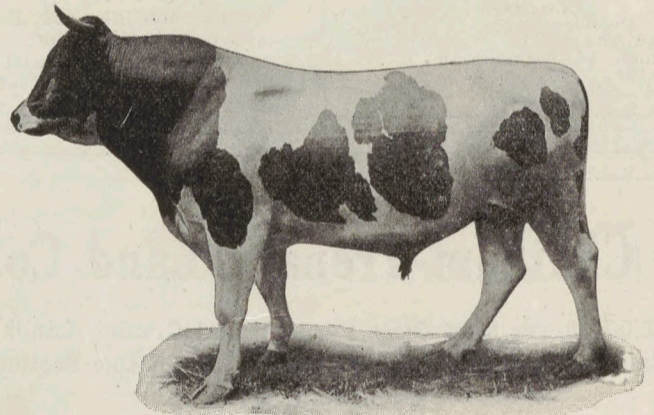
WIRE FENCING AND ROOFING



CLOVERLAND'S greatest Wholesale Hardware House offers you its services and purchasing power to help you secure the most reasonable price and the quickest delivery on your requirements for—

Sheep and Cattle Fencing,
"Certainteed" and "Pioneer"
Roofings,

Hardware Fixtures for Stock Sheds
and Ranch Houses



Famous Bull, Iron Range Fobes de Kol, Owned by John Quayle, Rock, Delta County, Clover-Land.

EVERYTHING you need in the hardware line can be secured from our Menominee warehouse—right here—the front door to Clover-Land. Come and see us—if you can't come, write or telephone. We want to hear from you—better still, we want to meet you face to face and talk it over and show you the greatest stock between Chicago and Duluth—right here in good old Clover-Land in the U. S. A.

Northern Hardware and Supply Company

Menominee, Michigan

A Cloverland Farmer's Experience With a **CASE** Tractor



Experience is the Best Teacher. Here are the facts:

NAME—Hodgkins Bros., Delta County, Michigan.
 TIME—Years of 1917 and 1918.
 LOCATION—Clover Crest Farm, Pine Ridge, Michigan.
 ADDRESS—R. F. D. No. 1, Escanaba, Michigan.
 TRACTOR—Case 9-18, two-plow type. Four-cylinder, gear-driven, kerosene burner.
 REFERENCE—Statement made by Edward J. Hodgkins, Tractor Operator.

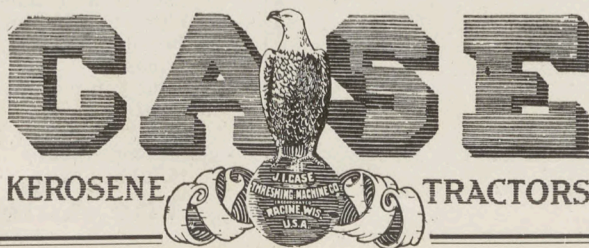
FARM—320 acres, 185 under cultivation.
 SOIL—Sandy loam, slightly rolling.
 FIRST YEAR—Tractor used for spring plowing 40 acres; pulling loader for one hundred tons of hay; filling silo with Blower machine; 40 acres fall plowing.
 SECOND YEAR—Only 20 acres left to be plowed, crops in on time; helped out neighbors with their plowing; and twice double discing; pulled hay loader gathering 75 tons of hay; filled silo and plowed 75 acres.

- “Never had time to double disc when we depended on horses for power.”
- “One hundred and fifty acres plowed, double disced and harrowed.”
- “All plowing was done eight inches or deeper.”
- “Fuel consumption, between two and three gallons of kerosene per acre.”
- “Oil consumption, one gallon of lubricating oil for every six acres.”
- “Grease for transmission and cups, one pound per day.”
- “Gasoline, one quart to one gallon per day, depending on number of stops.”
- “Tractor used for sawing wood, grinding feed, road work, manure spreading.”
- “Two year cost of upkeep, \$6.50. One gasket, clutch lining, 4 spark plugs.”

We invite you to ask your local Case Tractor dealer to show how you can use a Case Tractor on your farm with similar success.

J. I. CASE THRESHING MACHINE COMPANY, Inc.

RACINE, WISCONSIN
 700 State Street

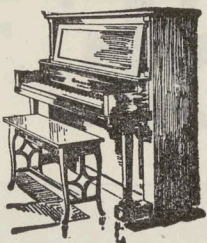


Nearest Factory Branch at
 OSHKOSH, WISCONSIN

G Everything in the Realm of Music and the Best **G**

A Better Piano

—One of the important advantages which selection at the House of Grinnell assures you.



WE are musical instrument specialists—our entire organization, resources and energies devoted to the sale of musical merchandise exclusively—a vast number of pianos are required is our twenty-four stores. It is, therefore, but natural that manufacturers everywhere are anxious that we represent them. Then, too, we are, ourselves, piano manufacturers.

CONSIDERING these factors, together with our positive knowledge of piano worth gained through the nearly forty years we have been in the music business, it could hardly be otherwise than that ours should be a superior line.

WHATEVER amount you have in mind to invest, it will procure for you a Better Piano at the House of Grinnell—for each Piano of our line is the leader of its respective class.

CONVENIENT PAYMENTS

Grinnell Bros

Exclusive Michigan Representatives World's Best Pianos
Detroit Headquarters:

GRINNELL BLDG., 243-245-247 Woodward Ave.

BRANCH STORES: Detroit Branch, 57-59 Monroe Avenue; Arlian, Ann Arbor, Bay City, Escanaba, Flint, Highland Park, Jackson, Kalamazoo, Lansing, Port Huron, Pontiac, Saginaw, Sault Ste. Marie, Traverse City, Ypsilanti, Chatham, Ont., Windsor, Ont.

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- "Pianola"
- Player-Piano
- Duo-Art
- Reproducing Piano

The Upper Peninsula of Michigan and Its Development

By ROGER M. ANDREWS

THE Upper Peninsula comprises nearly one-third of all the area of the great state of Michigan the largest state, excepting Georgia, east of the Mississippi river.

The one-ninth of the population of Michigan residing in the Upper Peninsula pays nearly one-seventh of all the state taxes.

The Upper Peninsula is larger than Delaware Massachusetts and Connecticut combined.

The Upper Peninsula has a larger population than Delaware, Idaho, Wyoming, Arizona, Nevada or New Mexico.

The assessed valuation of the Upper Peninsula of Michigan is greater than the assessed valuation of Arkansas, Arizona, Colorado, Florida, Idaho, Mississippi, Maine, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, South Carolina, Utah, Vermont or Wyoming.

Our assessed valuation is nearly \$50,000,000 more than the combined assessed valuation of Utah and New Mexico.

Houghton county has a larger assessed valuation than the entire state of New Mexico and more population than the state of Nevada.

There are more miles of railroad in the Upper Peninsula of Michigan than in Arizona, Connecticut, Delaware, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, Utah, Vermont or Wyoming.

Situated in the upper half of the north temperate zone, the Upper Peninsula of Michigan has sunshine more than twelve hours every day from March 20 to September 22 and, in June, the sun shines almost sixteen hours out of the twenty-four. This means successful farming, for the soil is fertile and its development has only been delayed because of the large op-

erations in lumbering and mining which, great as they are and have been, are now to be followed by the turning into profitable farms of some 7,000,000 acres of rich land.

That greatest American agriculturist, Hon. James Wilson, secretary of agriculture, said over his own signature: "There is every reason why successful agriculture can be carried on in the Upper Peninsula. It should become a great dairy and fruit country. It will grow all the crops for dairying and stock breeding, and it will outlast its mining industries, great as they are."

Frank J. Hagenbarth, of Utah, president of the National Wool Growers' Association, said on Oct. 10, 1917: "You have the greatest livestock and dairy country in the United States, if not in the world."

There are employed in the Upper Peninsula of Michigan more wage-earners than in Kansas, Nebraska, Colorado, Oregon, Arkansas, Montana, Vermont, Utah, Oklahoma, Delaware, Arizona, Idaho, North Dakota, South Dakota, Nevada, New Mexico or Wyoming.

The Upper Peninsula has more wage-earners than all the wage-earners of the combined states of Wyoming, Nevada, South Dakota, North Dakota, Idaho, Arizona and Delaware.

Nearly one-third of all the iron ore and approximately one-sixth of all the copper produced in the United States are mined in the Upper Peninsula of Michigan.

The lumber products of the Upper Peninsula are equal to the lumber products of Wisconsin, Pennsylvania, California, Minnesota, Illinois or Mississippi.

(Continued on Page 46)

Here Is a Ranch Bargain Worth Looking Into Today

Four hundred and eighty acres of Cloverland's best land, now under cultivation. All fenced in, cleared of stumps, stones, etc. Good hardwood land. Farm buildings complete (insured for \$15,000.) Farm machinery, tractor, gang plow. Silo. Can winter from 1,000 to 1,500 sheep.

Farm is two miles from railroad station, with good roads. Adjoining 2,500 acres of grazing land, nearly all cleared. Plenty of water.

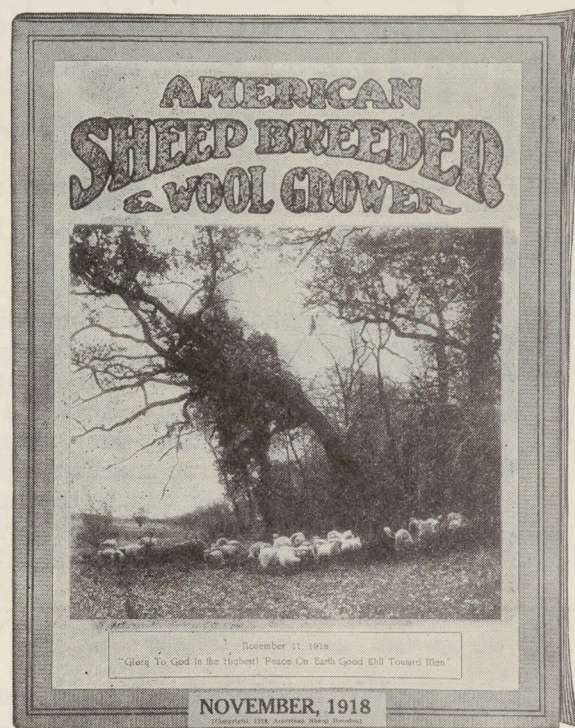
Another 10,000 acre tract of good grazing land available, on main line of Chicago & North-Western road, in Cloverland.

To bona fide inquirers we will quote terms and grazing offers which make this one of the best opportunities in the section of country which Frank J. Hagenbarth, of Utah, says is: "The greatest livestock and dairy country in the United States, if not in the world."

We refer, by permission, to Cloverland Magazine.

B. J. GOODMAN, JR.

ISHPEMING, Cloverland, MICHIGAN.



The American Sheep Breeder and Wool Grower

tells you how to feed and care for your ewes and lambs, keeps you posted on wool and mutton prices, informs you of the most efficient practice in combating disease, gives you others' experience as to breeding, shearing, feeding, shipping, winter care, equipment, buildings.

Put yourself heart and soul into the game and join the brotherhood of shepherds.

Only \$1.25 per year. Subscribe now, mentioning this ad, and get fifteen months for the price of twelve.

Clubbed with Cloverland Magazine, \$2.00 per year.

The American Sheep Breeder Co.

U. S. YARDS, Chicago, Illinois

UNITED STATES DEPOSITARY

The First National Bank of Milwaukee, Wisconsin

CAPITAL and SURPLUS \$4,000,000

Commercial Banking Business conducted in all
its branches, including

Foreign and Domestic Exchange,
Collections, Bond Department,
Savings Department,
Safe Deposit Vaults.

ACCOUNTS OF BANKS, BANKERS, MERCHANTS,
MANUFACTURERS AND INDIVIDUALS INVITED

(Continued from Page 40)

approximately 8,000,000 feet of lumber in the yards awaiting shipment.

The company cuts most of the logs at camps within four or five miles of Sagola; but a considerable quantity is floated down the Michigamme river to Kelso, where it is loaded on the cars and taken to the Sagola mill.

Patrick Flanagan, one of the leading pioneers in the logging industry, died at Sagola, Sept. 11, 1918.

The company estimates timber enough of its own to run the mill at least twelve or fifteen years, and enough more that can be purchased to keep the mill going another two or three years. Then it is likely the lumber business will give way to stock raising, dairying and sheep raising, as the logged-off land of Michigan is ex-

cellent for that purpose. It is supplied with the very best of pure, clear, cold water good for man or beast. Lumber and mining are the main support of the laboring classes in Cloverland. Yet thousands of bushels of potatoes, the best in the world, are raised and marketed, also great quantities of hay.

The best of vegetables, small grain and hay, and fruit are raised here—as good or better than can be raised in any other part of the world. Men and small capital are needed to remove the stumps and logs from the cut-over lands, level and cultivate it. The soil, which is rich with the accumulated humus of centuries, possesses possibilities far greater than the wildest dreams of the uninitiated have ever pictured. Cloverland has a great future.



W. H. Osborn and Charles Salewsky of Menominee, in the latter's famous potato field.

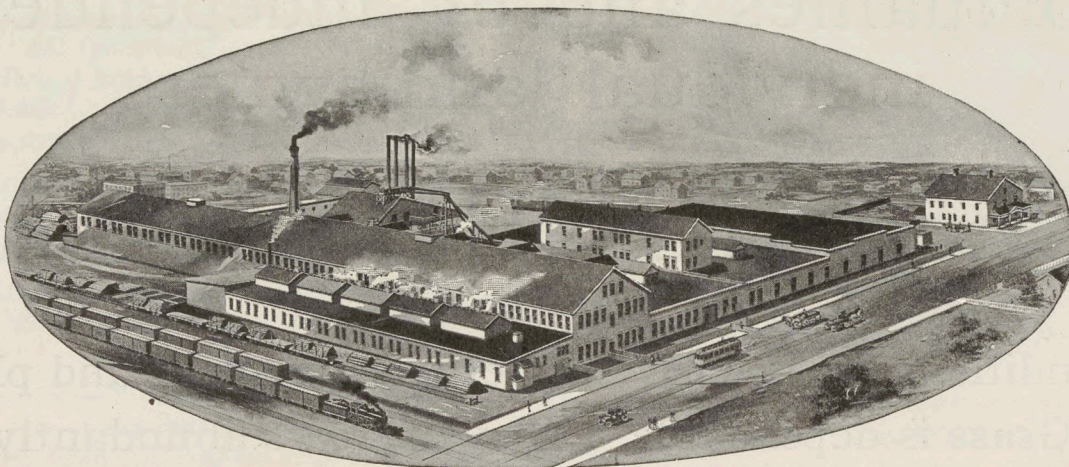
Delta County and All of Cloverland ARE DOING BIG THINGS

Among the other big things in Delta County, Cloverland, Michigan, this company claims a part.

Here is our daily output in useful things made from forest products of the Upper Peninsula:

20,000,000
Tooth Picks

1,250,000
Wooden Dishes



731,000
Clothes Pins

30,000
Wooden Picnic
Plates

BIG FIGURES AND TRUE

ESCANABA

ESCANABA MFG. COMPANY

MICHIGAN

LUCE COUNTY

situated in the best section of Cloverland for those engaged in grazing and agricultural pursuits

Cut-Over Timber Lands

Improved Farm Lands

Sandy Loam and Clay Soils

BUMPER CROPS RAISED HERE

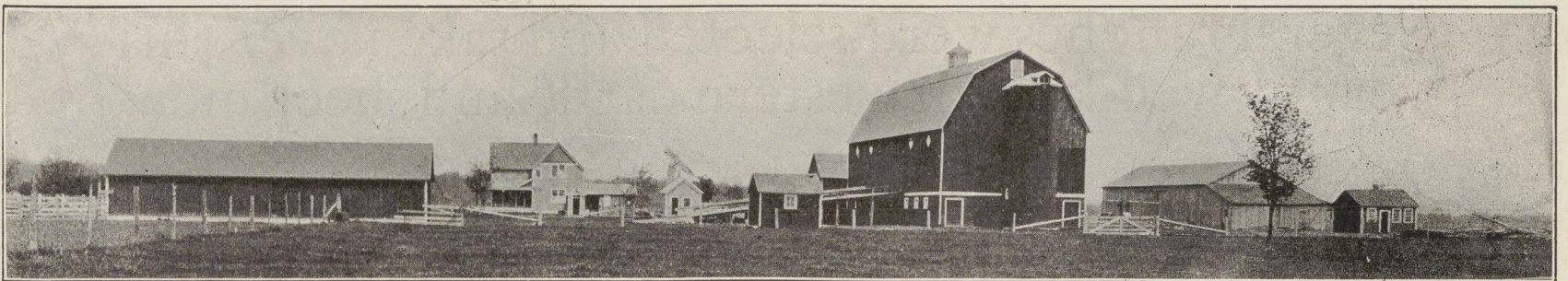
Rye, 32 bushels to the acre; Oats, 65 to 70 bushels to the acre

Both fall and spring wheat which mills into a very fine flour; clover and timothy in abundance; potato and root crops cannot be equalled anywhere in the country.

Good Pasture Every Year—no drought known here

For further detailed information address

LUCE COUNTY COMMERCIAL CLUB
NEWBERRY, MICHIGAN



The pride of Luce county, Murphy & Gormely's 600-acre farm, devoted to peas, oats, barley, potatoes, ensilage, corn, alfalfa and mixed hay. The home of pure-bred registered Shorthorn cattle.

★ ★★ ★

THIS company paid, in cash,
to Michigan and Wisconsin
farmers who grew Sugar Beets
for the 1918 season, the sum of

\$425,000

Menominee River Sugar Co.
Geo. W. McCormick, Manager

MENOMINEE, MICHIGAN

★ ★★ ★

Recommendations for state road building of a large supply of trap rock from the upper peninsula, to be transported by water and to be crushed by inmates of state prisons, was made in Lansing by Senator F. H. Vandenoorn of Marquette.

It is not believed in bowling circles that an upper peninsula tournament will be held in the spring. If any considerable number of teams should get together for a tourney it would be but a shadow of the meeting of previous years.

★ **The Upper Peninsula of Michigan and Its Development** ★

(Continued from Page 42)

The Upper Peninsula pays in taxes a greater total than the taxes paid in Arkansas, Colorado, Vermont, Wyoming, Utah, South Carolina, North Dakota, New Mexico, New Hampshire, Montana, Mississippi, Florida or Idaho.

There is not a city in Arizona, Nevada, New Mexico or Wyoming as large as Escanaba, Michigan.

There is not a city in Vermont, Wyoming, New Mexico, Nevada, Mississippi, Arizona, North Dakota or South Dakota as large as Calumet.

Calumet is larger than any city in Oregon except Portland; in South Carolina, except Charleston; in Utah, except Salt Lake City; in Louisiana, except New Orleans; in Maine, except Portland; in Maryland, except Baltimore, and in New Hampshire, except Manchester.

Within the last five years the Upper Peninsula has spent more than \$4,000,000 for good roads, which is more than the amount spent in that period by fourteen other states in the Union.

The Upper Peninsula of Michigan has more public schools than Rhode Island, Delaware, Wyoming, New Mexico, Arizona, Utah or Nevada.

The Upper Peninsula of Michigan spends more for public schools than New Hampshire, Vermont, Rhode Island, Delaware, Wyoming, New Mexico, Arizona or Nevada.

The Upper Peninsula has more pupils enrolled in its public schools than Delaware, Wyoming, New Mexico, Arizona or Nevada.

The percentage of illiteracy in the population 10 years of age or older in the Upper Peninsula is less than the same percentage of illiteracy in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Illinois, Missouri and all the southern states of the Union.

The Upper Peninsula pays the United States government a larger annual corporation tax than Arizona, Arkan-

sas, Florida, Idaho, Mississippi, Montana, New Hampshire, North Dakota, South Dakota, South Carolina, Vermont or Wyoming.

The Upper Peninsula pays the United States government a larger annual internal revenue tax than Alabama, Arkansas, Delaware, Georgia, Kansas, Maine, Mississippi, Montana, New Hampshire, Oregon, South Carolina and Utah.

The per capita wealth in the Upper Peninsula of Michigan is greater than the per capita wealth in Arkansas, Colorado, Nebraska, New Hampshire, Vermont and all the southern states.

There are 75 banks in the Upper Peninsula of Michigan, the savings deposits of which are greater than all the savings deposits in Delaware, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Mississippi, Louisiana, Kentucky, Tennessee, Indiana, Kansas, Montana, Maryland, Colorado, Washington or Oregon.

The average deposits to each depositor in the Upper Peninsula are larger than the average in eighteen other states.

Excelling so many states in population, area, wealth, manufacturing, education, bank savings, amount paid the federal government for its expenses, in miles of railroads, number of mines and factories, in agricultural opportunities, in cities, and harbors, churches and public schools, the Upper Peninsula of Michigan confidently asserts its identity.

Augustus C. Carton, secretary of the public domain commission, a well known state politician, who has many friends in Cloverland, has resigned his position, to take effect as soon as his successor has been appointed. Mr. Carton has been elected president of the Michigan-Colorado Mining company, capitalized at \$3,000,000, and expects to leave for Colorado soon to take charge of the copper mining company.

GIRARD LUMBER COMPANY

J. W. Wells, President

WE offer the western grazers their choice of 10,000 acres of Cut-over Lands in Cloverland, Northern Michigan; 30,000 acres of cut-over land in Florence and Forest counties, Wis.

Write Us for particulars or come and see these lands for yourselves.

Several ranches were selected and taken over this year by well-known western cattle and sheep men.

GIRARD LUMBER COMPANY DUNBAR, WISCONSIN
MENOMINEE, MICH.

NOT JUST SELLERS BUT SPECIALISTS

Converting Consignments into Cash is the Simplest Thing in the World: that may be "Selling" --but to sell that stock at the figure that means its maximum market value--that is "Specializing."

Our salesmen are trained along the lines of getting the ultimate dollar: or in other words, knowing the "psychological moment" to say to the bidder "They're Yours!"

CLAY, ROBINSON & CO.

LIVE STOCK COMMISSON

CHICAGO
DENVER

SOUTH OMAHA
SOUTH ST. PAUL
SIOUX CITY

KANSAS CITY
EAST BUFFALO
FORT WORTH

SOUTH ST. JOSEPH
EAST ST. LOUIS
EL PASO

Upper Peninsula Cut-Over Lands

Suitable for Grazing or General Agricultural Purposes

FOR SALE

in Alger, Chippewa, Gogebic, Luce,
Mackinac and Schoolcraft Counties

THE Northern Peninsula of Michigan is the best Live-stock and Dairy country in the United States, if not in the world. It can care for 8,000,000 sheep and 1,000,000 head of cattle.

For information write
LAND DEPARTMENT, Charcoal Iron Company of America
MARQUETTE, MICHIGAN

Reclaiming Water-Logged Lands a Profitable Enterprise

(Continued from Page 12)

one sack of Portland cement to not more than three cubic feet of clean, well-graded sand. Sufficient water should be added to the mixture, so that when the tile are manufactured the revolving core or packer-head of the machine when stamping the concrete, will cause moisture to appear on the surface of the tile as web-like markings after casings are removed. Proper hardening of the concrete is also important and should be performed after the most approved present-day practice, with which the modern concrete drain tile manufacturer is familiar.

Co-operative drainage has been rapidly growing in favor during the past few years. Districts are organized under the statutes to be supervised either by county or circuit courts. Co-operation or united effort is made necessary because one of the first considerations in connection with any drainage project is to arrange for the necessary permanent outlets for the many lines of small tile drains.

Every year will somewhere bring forth the question of disposing of surplus water on or in the soil, because Nature does not distribute our allotment of rainfall so that the requirements of growing crops will always be met everywhere in the best manner. As such conditions may be expected in any locality, the best safeguard against Nature's variable tendencies is to prepare land so that its moisture content and soil conditions as regards maintaining and supplying an even amount of moisture, may be controlled by some suitable system of concrete tile drainage. Farm lands have become too valuable within recent years to permit them to lie idle or in such condition as to make cultivation unprofitable, where a good crop yield can be assured from investment in drainage. Every acre of land which does not yield a profit is an

expense to the farmer. Taxes go on regardless of returns.

Today "conservation" is the watchword. No doubt the unparalleled prosperity of our country when most soils were virgin and one could have his pick anywhere, was responsible for overlooking many opportunities such as are being brought to light by the application of modern knowledge and methods. The government and every state are teaching the economy of better farming methods, and these fully recognize the possibilities that may be developed through concrete tile drainage. Money expended for drainage is capital invested in eliminating waste in agricultural methods, and the profits obtained from doing this are certain.

Progress that has been made in localities where drainage projects have been systematically planned and carried out, especially drainage through the medium of concrete tile, would surprise one were he to collect figures on the subject. Large yields are now common where before small ones were obtained or were even uncertain; while such increased yields have often been obtained at the same and sometimes at less expense than were the smaller and less profitable ones.

Such results in many widely scattered sections of the country have awakened land owners to undreamed-of possibilities from reclaiming wet fields, sloughs, marshes and similar waste areas. Drainage projects will increase in numbers just as rapidly as the economy and profits of drainage are better understood, and the day is not far distant when millions of acres of land now idle and unproductive—a burden and expense to their owners—will be profitable and beautiful garden spots.

The First National Bank of Marquette was 55 years old on January 22d, 1919

Its resources and the size of its city considered, the record of this bank compares favorably with the record of any national bank in the U. S.

Established in 1864, the First National Bank of Marquette showed resources on Dec. 31, 1918, amounting to \$3,259,000.00.

The officers take special pride in the record made by the First National Bank during the great world war. At various times during 1917 and 1918 this bank aided the Government by purchasing on its own account certificates of indebtedness aggregating \$1,450,000 and war savings stamps to the amount of \$7,500, making a total of \$2,775,150 subscribed to Liberty Loans, Certificates of Indebtedness, and War Savings Stamps.

The officers of the First National Bank of Marquette believe in Cloverland. They believe that sheep and cattle can be raised in Northern Michigan to the mutual advantage of the grazer and the business interests in general.

Grazers are invited to make use of the facilities which this old and reliable financial institution offers in banking service. We have numerous patrons residing at a distance and on this account we are familiar with the needs of out-of-town customers.

Your patronage is solicited and correspondence invited.

FIRST NATIONAL BANK, Marquette, Mich.

Capital and Surplus \$250,000

DESIGNATED DEPOSITORY OF THE UNITED STATES

Have You a Dependable, Permanent Range?

IF NOT, COME TO CLOVERLAND—WHERE

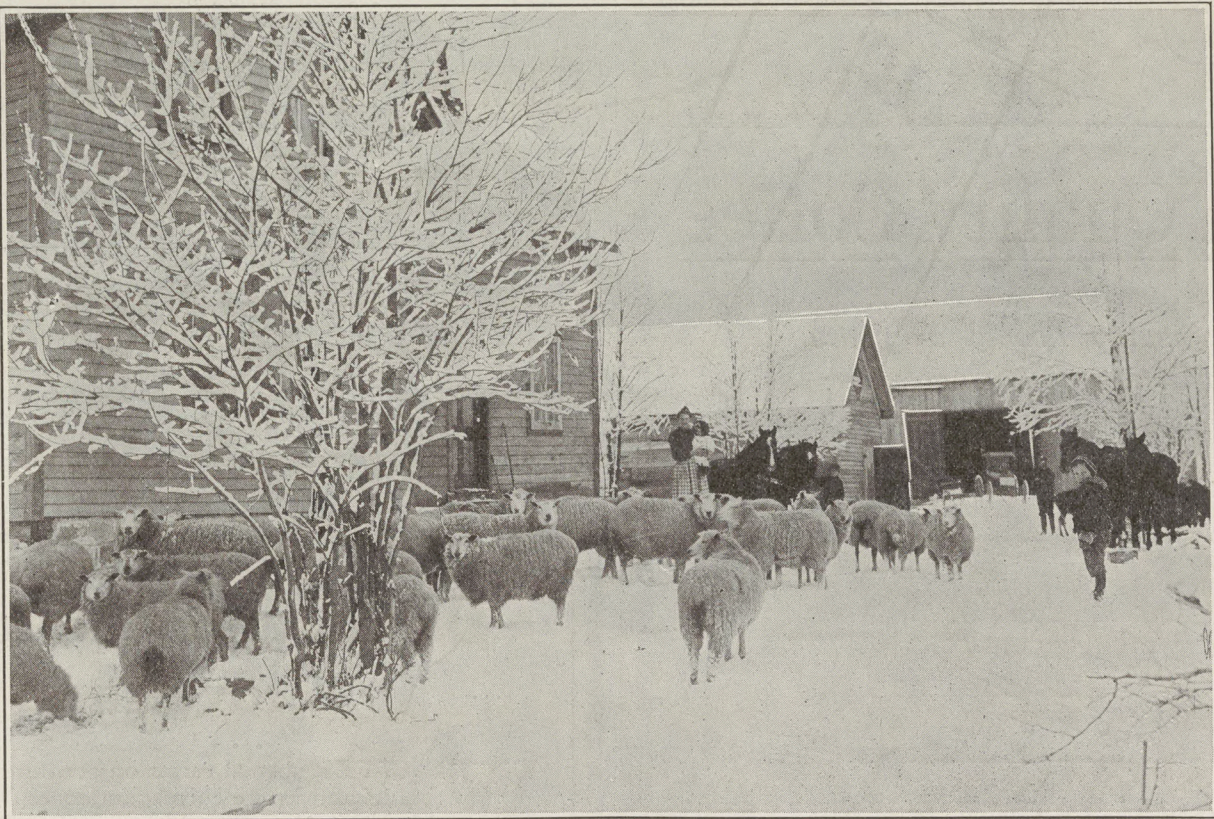


SHEEP
HAVE
GREEN
NUTRITIOUS
GRASS
ALL
SUMMER;
NO
DROUGHT

CLOVER HAY
YIELDS
THREE TONS
PER ACRE;
BEST
WINTER
SHEEP FEED
IN
THE WORLD



Western
Stockmen
and Farmers
have best
of success
with Sheep
and Cattle;
Read each
page of this
magazine
carefully.



We have
tracts of cut-
over lands
of all sizes
for practical
stockmen
who want to
succeed in
a permanent
manner.

WINTERS ARE IDEAL FOR WOOL PRODUCTION

PRICES AND TERMS THAT WILL SUIT, AND ALL INFORMATION CHEERFULLY FURNISHED WITHOUT YOUR INCURRING THE SLIGHTEST OBLIGATION TO US.

CONSOLIDATED LUMBER COMPANY,
MANISTIQUE, MICHIGAN
"In the Heart of Cloverland"



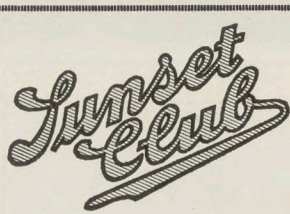
Sheepmen, Cattlemen, Ranchers

will find at ESCANABA a source of
supply unexcelled in Cloverland

The Delta Hardware Company is particularly well equipped to take care of all your wants in **Hardware, Fencing and Machinery**—wholesale and retail.

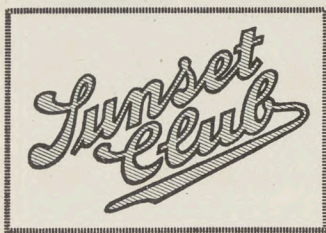
LET US PROVE IT!

DELTA HARDWARE COMPANY
ESCANABA, MICHIGAN, "The Hub of Cloverland"



Truly a Quality Coffee

*It is the result of twenty-two years
of careful and intelligent blend-
ing by coffee experts.*



INSIST ON THE GENUINE

ROASTED and PACKED BY

JOANNES BROS. COMPANY

GREEN BAY, WISCONSIN

The Mills Which Made the "Mackinaw" Famous

(Continued from Page 14)

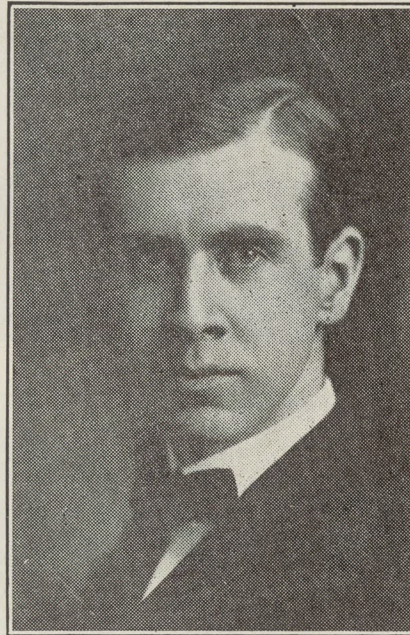
age sheep raising. In November, 1917 the company gave to six boys in each of the counties of St. Louis, Cariton and Itasca in Minnesota, and Douglas and Bayfield in Wisconsin, four ewes, already bred. The sheep or increase were not to be killed except with the consent of the Patrick-Duluth Woolen Mills, all the wool to be sold to the mills at current prices until the sheep were paid for, the sheep to be paid for from the sale of their raw wool and ram lambs. When paid for the sheep and increase became the permanent property of the boys.

times, to purchase raw material to keep its plants going.

The Patrick-Duluth Woolen Mills in Duluth alone require the fleece from 15,000 monthly, or 180,000 annually. In the three counties in Minnesota and the two in Wisconsin, where the company has started boys' sheep clubs and which have an area sufficient to grow enough wool to keep the Patrick-Duluth mills running full time the year round, perhaps enough wool is now produced to keep the mills going for one whole day. The Mankato mills require a great deal more raw wool than the Duluth plant, hence the Patrick-Duluth company uses annually the fleece from more than 400,000 sheep. And what may be termed "local farmers," which includes farmers living a great distance from Duluth, provide less than 20 per cent of this amount of raw wool.

The opportunity for raising sheep is no better anywhere in the world than in the district tributary to Duluth, and the splendid market the Patrick-Duluth mills afford for wool makes the sheep industry specially attractive to industrious farmers and progressive ranchmen from the west. The wool market is at their very door.

In the heart of Cloverland, in the geographical center of the thirty millions of acres of cut-over lands available for sheep grazing, is a great woolen manufacturing concern that must import from other districts and from South America 80 per cent of its raw wool to keep its machinery turning the year round.



Mitchell F. Jamar, Jr., manager of Patrick-Duluth mills and factories.

The company also offered substantial cash prizes for the best exhibits at the county fairs, and the tri-state fairs at Superior, Wis. This plan of conducting boys' sheep clubs has been very successful and will ultimately mean a great increase in wool production in that district. Farmers also have been encouraged to raise sheep, and a few have taken hold of this new industry in a very modest way, or according to their means. But at best, this is slow development of the wool growing industry, and still there is a great manufacturing concern in Duluth that must go outside of Cloverland, go outside the United States at



Patrick Company's general office and wholesale house

Legal action was started in district court, Superior, against the United States Steel corporation by John B. Peter and Phillip Lemieux and Maggie Martineau, all Indians of Superior, for recovery of title to lands on Wisconsin point and submerged lands in Alonz bay, Superior, acquired by the Steel corporation for the use of terminals.

The Laurium village council failed to come to any compromise with the Houghton County Traction company regarding the latter's request for an increase in fares. The company has asked for a seven cent fare, but at a recent meeting of the Houghton village council a compromise was made whereby the council agreed to allow the company a six cent rate.

Banks and Bankers of Cloverland

WE OFFER special terms on accounts from Michigan banks and invite correspondence from our Cloverland friends. Should any of your customers visit Jackson, or move here, we shall be glad to have you give them a letter to us. We shall extend a hearty welcome to them while in our city.

NATIONAL UNION BANK

MEMBER FEDERAL RESERVE SYSTEM

Jackson, Mich.

The Chatham and Phenix National Bank

OF THE CITY OF NEW YORK

149 Broadway, Corner Liberty Street

Capital and Surplus - - - \$5,000,000.00

Total Reserves Exceeding \$100,000,000.00

Charter Member N. Y. Clearing House

Member Federal Reserve Bank

United States Depository

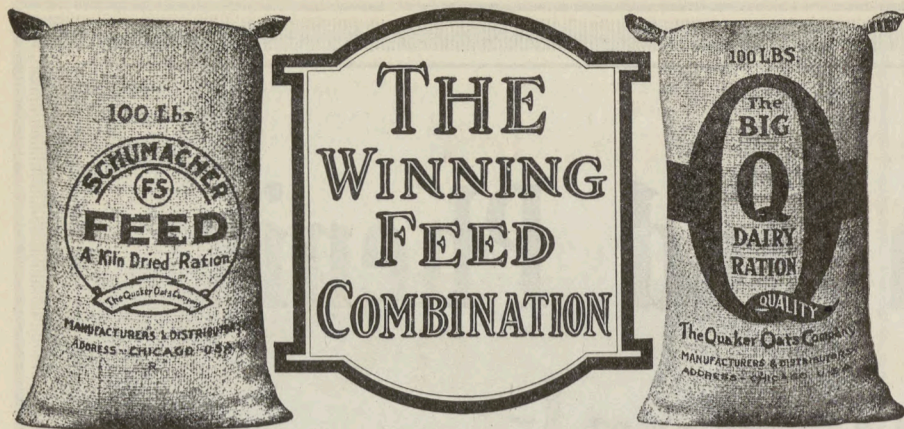
OFFICERS:

LOUIS G. KAUFMAN.....	President
FRANK J. HEANEY.....	Vice-Pres.
RICHARD H. HIGGINS.....	V.-Pres.
WILLIAM H. STRAWN.....	V.-Pres.
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JOSEPH BROWN.....	Asst. Cash.
GEORGE M. HARD.....	Chairman

We invite the Accounts of Banks, Bankers, Manufacturers, Merchants and Individuals

We are interested in the present and future of Cloverland



A Sheep Experiment in Cloverland

(From American Sheep Breeder)

E. E. Pratt is carving out a home for himself and family in a district where lumbering is still the chief industry, and his experiences are told in the following interesting manner:

"Last spring I rented a farm, 160 acres, with team, tools and stock furnished, even a house furnished inside; stoves, furniture and dishes and some provisions were in the house when we (my wife, self and six boys) moved in. The stock consisted of 1 cow, 2 heifers that freshened April 21st and August 28th, then my cow freshened last of April, one yearling steer and 94 ewes, one buck and 6 yearling wethers, 25 hens. I had 6 ewes. The one buck to 94 ewes gave me a very poor per cent of lamb crop, and one of my ewes just laid down and died while I was shearing another ewe. A few days ago I heard a dog barking back in the sheep pasture and my oldest boy took a gun and ran back. He found him and a ewe in the river. She was fighting the dog some. My boy clipped a little hair and skin off the dog's head but did not kill him. Then two sheep died from old age. I lost three lambs born dead, one from scours, one from bloat. I cut one lamb's tail off when it was too young and he bled to death and four lambs just disappeared, don't know whether it was by dogs, foxes, wolves or by theft. You ask in your letter for something new. I have learned a great many things this summer, but perhaps they are not new to your readers. I am going to tell you one thing, though, that might help some in building brush fence for sheep. I suppose everybody knows how to put up a good woven wire fence. I built and rebuilt 400 rods of woven wire fence, but we had to build about 80 rods of brush fence, and when I came to a bad place I would skip that, thinking the sheep could not get through; but I soon learned that 200 sheep and lambs had more time to look for bad places and weak spots in the fence than I had to chase them, so I just took a little time to put two and two together. Where

it was nice and clear along the inside of the fence the sheep would keep walking along, but when they came to a bad brushy spot, instead of going back around they would go through and always come out on the outside of the fence. When I saw that, I just made them a good clean path all along the inside of the fence and built it up straight inside, as the sheep can climb a slanting fence.

"This is a new country, the lumbering is not all done yet. One set of camps with a two year job at the corner of the farm I am on, and two miles north a big set of camps that has been there three years and now they are putting up a portable saw-mill. They will be there a few more years. A mile south is a camp and a mile southwest another camp. But the farmer is right on the heels of the jobber and the sheep is going to be the biggest factor of all in clearing the land. I believe that if a man wants a home and if he can get 25 or 30 good ewes and a cow, besides a team, that he could clear up and pay for a home here quicker than anywhere else. A man that never has handled sheep finds it hard to believe what they will do. They eat so many more weeds and things that a cow won't that makes them so valuable for clearing up land. Then, that fleece comes along just about the time a farmer has spent every available cent for seed and provisions, (I mean a new beginner.) Then the crop of lambs in the fall will make a nice payment on his farm.

"You ask about feeding lambs. As a rule here we don't feed grain to lambs, as the farmers scarcely raise enough oats for their teams. You see the teams go into the camps in winter and it takes all the grain that can be raised on their small clearings. Oats is a fairly good crop, but corn is not raised here on account of the frost, too much timber yet. Hay and potatoes do fine, as do all root crops.

IN Schumacher Feed and Big "Q" Dairy Ration we have supplied dairymen with the most simple, easy to feed ration possible to compound. One that not only produces exceptional results in the pail, maintains the best physical condition of their cows, but also saves a lot of time and labor and eliminates the guess-work incident to mixing their own ration. With

SCHUMACHER FEED AND BIG "Q" DAIRY RATION

fed in combination you can easily and quickly proportion the amount of protein and carbohydrate content to suit the individual requirements of every cow.

This combination has unusual palatability, high digestibility, nutrition, wide variety and proper bulk. It makes feeding easy, economical and accurate. Simply mix these feeds in proportions to meet the individual needs of each cow and your dairy feeding problems are solved. For more energy and vitality, feed more Schumacher Feed, the carbohydrate ration, at the same time giving each cow all the Big "Q" (protein) that she will respond to. This method results in maximum production over long periods of time and improves to a wonderful degree the general health of your herd.

The Quaker Oats Company Address **Chicago, U.S.A.**



Stockmen

We own grazing lands in the great open areas of Cloverland where natural grass settings are found. We can offer you any size tract desirable. Write us for full particulars.

BALDWIN CORPORATION, Appleton, Wis.

A word and a valuable suggestion
to you regarding

“The Lost Purple Trostan Calf”

THIS wonderful color, re-discovered by us, and so evident in officers' shoes, boots, puttees and leggings, was during the war emergency regulations officially adopted by the authorities and the only “color” tanners were permitted to produce in shoe leathers. Manufacturers of high-grade ladies' and gentlemen's footwear are using

“Trostan Calf in the Lost Purple Color”

enabling you to obtain such shoes in nearly every first-class retail store.

Be Sure to Demand

TROSTAN CALF

in YOUR Shoes

TO further add to the popularity of this leather and prove its position as the beauty shade in colored leathers, justified and substantiated by its use in the finest shoes, purses, etc., we have made arrangements with the leading manufacturers of high-grade leather goods, enabling us to supply you with gentlemen's billfolds or ladies' purses at wholesale prices, as outlined on certificate on bottom of page and will be pleased to have you take advantage of this purchasing privilege.

ALBERT TROSTEL & SONS COMPANY, Tanners, Milwaukee, Wis.

MEMBER MILWAUKEE ASSOCIATION OF COMMERCE

CERTIFICATE

ALBERT TROSTEL & SONS COMPANY, Milwaukee, Wisconsin,

Gentlemen:—Enclosed please find \$..... for which please send me

Please mark article desired. [] Gentlemen's unlined billfold de Luxe. } made from Trostan Calf in the Lost Purple color.
[] Gentlemen's fully lined billfold de Luxe. }
[] Ladies' backstrap hand purse, }

(\$2.00 and this certificate entitle you to the unlined billfold.) (\$3.00 and this certificate entitle you to either the fully lined billfold or the ladies' hand purse.)

Raising the Dairy Calf

(Continued from Page 7)

fed one to two pounds four times a day, while a large, strong one could be fed six pounds twice a day. At two weeks of age the calf should not be getting over fourteen pounds of whole milk per day.

When the calf is two weeks old, begin taking out one pound whole milk and replacing it with one pound skim milk. Do this each day so that in two weeks or when the calf is four weeks old it will be getting all skim milk.

When taking out whole milk begin putting a little ground feed in the pail, or still better, get it to eat the feed dry from the hand or a box. Always have some good, clean clover hay before them. They will not over-eat of hay or grain. Till three months of age give them all the grain they will eat. It will be about two to three pounds per day.

Silage and roots, like hay and grains, must be fed carefully so as not to over-tax the digestive tract. Have clean water always accessible and give salt as needed.

Exercise is very important to all young animals, but they should not be forced out into storms and bad weather or flies. Judgment must be used. Have small runs and box stalls in dry, light and ventilated stables. Buildings need not be expensive to secure these things.

Remember these points:

1. Weigh the milk fed to calves so as not to overfeed.
2. Avoid scours by cleanliness of pails, etc., and don't overfeed.
3. Calves can't eat and drink dirt, live in bad air, go without sunshine or exercise and be healthy.
4. Milk at feeding time should be fed at the same temperature as when milked from the cow, or between 95 to 100 degrees F.
5. Feed regularly.
6. Dehorn the calves. As soon as the starting horn can be located, clip the hair away from the spot where the horn is starting and apply caustic potash. This can be done when the calves are only a few days old

7. Keep the calf and heifer growing and in thrifty condition.

Calf don'ts:

1. Don't overfeed.
2. Don't feed sour, cold or unclean milk.
3. Don't keep calves in a dirty, dark or uncomfortable pen.
4. Don't raise the calf without milk.
5. Don't feed the calf "wind" in the form of foam. Feed them milk.
6. Don't guess at what is being fed. Weigh the milk and grain.

The Reade-Burton company is the title of a newly launched corporation organized to operate the "R. B." ranch at Whitney, not far from Escanaba. The officers are: H. W. Reade, president, and Raymond Burton, secretary and treasurer. The ranch is comprised of 2,000 acres of land, some of which is already fenced. The company is to specialize in cattle, sheep and hogs, handling a large number of feeder cattle and sheep each season in addition to the stock that is to be kept on the ranch. Offices of the company will be maintained in Escanaba and at the ranch house at Whitney.

Bert Hunt, of Ontonagon county, a Rockland trapper, made a rich haul recently when he trapped a fox of the silver gray variety, one of the most valuable specimens ever caught in the copper country. The pelt is valued as anywhere between \$700 and \$1,000.

Miss Julia Bussiere has been named chairman for L'Anse on the Women's Committee, Council of National Defense, to succeed Mrs. Del Menard, deceased. Mrs. Octave Sicotte is the county chairman of the committee.

The mills of the Settlers' Milling company in Ironwood township and the Farmers' Elevator & Milling company in Bessemer are nearing completion and will be operated in the near future.

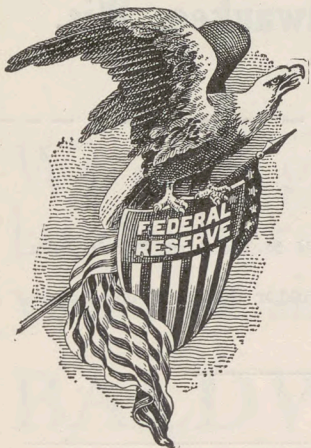
Irving Quick, a foreman of the Marquette Piqua Handle & Manufacturing company, died at St. Luke's hospital following an illness of influenza.

Edger E. Cole, of Roselawn, Ontonagon county, has been released from a German prison and is now in France.

OFFICIAL CLIMATOLOGICAL DATA of CLOVERLAND

for the ten-year period, 1907-1916, compiled from records of local offices, United States Weather Bureau

CLOVERLAND													
		Escanaba, Michigan		Lander, Wyoming		Helena, Montana		Salt Lake City, Utah		Roswell, New Mexico		Boise, Idaho	
Latest Average Killing Frost in Spring.....		May 9		May 16		May 2		April 22		April 8		April 21	
Latest Killing Frost in 10 Years.....		May 27		May 28		June 3		May 11		May 2		May 12	
Earliest Average Killing Frost in Fall.....		October 6		September 15		September 27		October 22		October 28		October 15	
Earliest Killing Frost in 10 Years.....		September 23		August 25		September 12		September 25		October 17		September 24	
Average Annual Growing Season (in Days)		149		121		145		182		203		178	
Shortest Growing Season in 10 Years.....		134		95		83		140		161		146	
Variation from Average (in Days).....		15		26		62		42		42		32	
	Temperature	Rainfall	Temperature	Rainfall	Temperature	Rainfall	Temperature	Rainfall	Temperature	Rainfall	Temperature	Rainfall	
January	16	1.42	19	.61	18	.91	29	1.46	41	.23	31	1.81	
February	15	1.57	22	1.01	24	.65	34	1.66	44	.52	36	1.56	
March	25	1.88	33	1.16	34	.55	42	2.23	50	.46	44	1.08	
April	37	2.63	44	1.81	44	1.02	50	1.61	59	1.38	50	1.19	
May	49	2.68	50	1.94	50	2.61	57	1.90	66	1.02	56	1.51	
June	60	2.71	60	1.03	54	3.49	67	1.31	74	1.23	64	1.44	
July	66	3.77	67	.59	66	1.31	75	.56	80	1.55	72	.62	
August	64	3.31	65	.62	65	.84	74	.72	76	2.59	71	.10	
September	57	3.01	55	1.31	54	1.61	64	1.10	69	1.28	62	.45	
October	46	2.09	44	1.54	44	1.33	52	1.80	58	1.25	52	1.30	
November	35	2.49	32	.50	34	.49	41	1.21	47	.51	41	1.61	
December	23	1.57	16	.97	23	.44	32	1.29	38	.62	30	1.42	
Total Inches	29.1		13.1		15.2		16.8		12.6		14.1		
Least Rainfall in any June, July or August, in 10 Years.....	August, 1908 1.06		August, 1913 .10		July, 1914 .21		August, 1915 Trace		June, 1915 .14		August, 1914 Trace		



FIRST NATIONAL BANK

Sault Ste. Marie, Michigan

The Oldest Bank in the Eastern End of Cloverland

Active
United
States
Depository

We will welcome grazers and offer every possible assistance.

If You Are the Man Here is THE Plan

You can own a splendid farm in Northern Michigan

You will be given financial assistance

We will supply farm machinery

We will build house and barns

We will provide horses, cattle, hogs, chickens, etc.

YOU HAVE THE OPPORTUNITY to take part in the most practical and profitable colonization plan ever conceived. By ordinary industry you can become comfortably established in reasonably short time.

THE NORTHERN MICHIGAN HOME PLAN:

We have 400,000 acres of land in the Counties of Chippewa, Mackinac, Schoolcraft, Luce, Alger and Marquette, in the Northern Peninsula of Michigan.

This land has been carefully selected, and adapted to diversified farming and grazing. Eventually the staple industry of this entire section will be dairying.

It is the purpose of the Company to sell in small lots—eighty to one hundred sixty acres.

This land has been surveyed as to quality and adaptability for various kinds of farming, and the prices of different tracts are made to conform as near to a just valuation as careful and scientific examination make it possible.

The land is divided into THREE classes:—FIRST CLASS, MEDIUM, SECOND CLASS. THE INVESTOR IS ASSURED HE IS PAYING FOR WHAT HE GETS. He will NOT be charged a first class price for second class land.

The Company is establishing central farms for the purpose of breeding registered stock, cattle, hogs, and chickens in order that the settler can start with a good grade and maintain the standard of stock breeding in the communities where the Company operates. The settler will also have the benefit of expert advice on stock raising and agriculture and all practical questions.

The Company has set aside a cash fund—in trust—for the purpose of HELPING THE SETTLER to start right. It is to be used in helping to clear the land—build houses and

barns, supply farm machinery, purchase horses, stock, cattle, sheep, pigs, chickens, etc.

The Company will do this solely to co-operate with the settler—so that he can get started without the usual heart-breaking experiences of the first few years. They naturally contemplate that the settler will have some means of his own—and a willingness to do his part in making a success of the venture.

THIS IS NOT A CHARITABLE ENTERPRISE—but merely a common sense co-operative plan in which both the Company and the settler will eventually profit.

You have a right to know all about us—we earnestly invite your investigation.

We have requested that Federal Officials and other interested concerns examine our books from time to time and look into our methods.

This Company has met the requirements of the Commissions in the States of Michigan, Wisconsin and Minnesota.

The fact that we have millions invested in this section of the country—and the broad fair terms we offer in the further development of it—is the strongest evidence of our faith in the belief that every settler will succeed.

If the settler fails—we fail also—our interests are identical.

WE BELIEVE in this plan and have facts and figures to prove that only ordinary, honest effort is necessary to success.

Send for Booklet and Complete Information

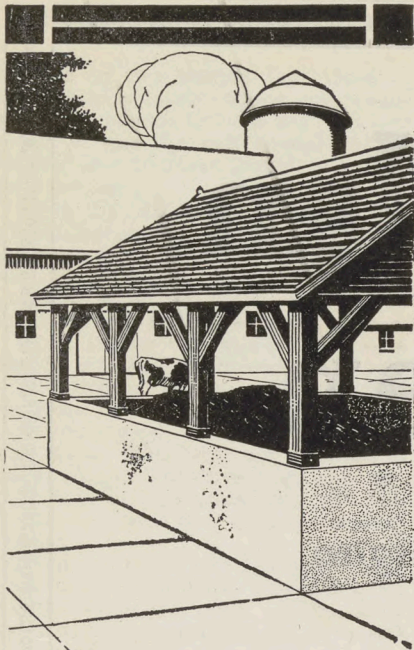
You are urged to investigate our company and our plan. The Northern Michigan Land Company plan approved by the Commissions of Minnesota, Wisconsin and Michigan. We refer to any reliable bank.

NORTHERN MICHIGAN LAND COMPANY

St. Paul offices: 202-203 Grain Exchange Bldg.

C. A. McCann, President

Milwaukee, Wisconsin, office: 309 Caswell Block



This CONCRETE Manure Pit will cost you nothing

The horses and cows will pay for it.

Unless stable manure is kept so that the valuable liquid contents are saved, 50 per cent of the fertilizing value of the manure is lost. An average horse or cow produces annually manure worth \$35. The liquid portion is worth nearly half of this. **A concrete manure pit will save it all.** So you see how the horses and cows can present you with a concrete manure pit free of charge.

Build one now and get the profits from this form of saving.

Ask for our free booklet telling how to build Concrete Manure Pits. Write our nearest district office.

PORTLAND CEMENT ASSOCIATION

- Offices at
- | | | |
|---------|--------------|----------------|
| Atlanta | Helena | Parkersburg |
| Chicago | Indianapolis | Pittsburgh |
| Dallas | Kansas City | Salt Lake City |
| Denver | Milwaukee | Seattle |
| Detroit | Minneapolis | Washington |
| | New York | |

Concrete for Permanence

Proposed Great Lakes-St. Lawrence-Tidewater Route Is Necessity

(Continued from Page 17)

not far distant future, there will be a deep waterway throughout."

The United States should lend encouragement and friendly co-operation to Canada in hastening the completion of the Welland canal and should immediately make overtures looking to the enlargement of the canals and locks of the St. Lawrence river for ocean shipping by making such reference to the international joint commission.

What will this mean to Michigan, Minnesota, Wisconsin and the middle west? What has it meant to New York to be the point where ocean shipping ends and distribution by all other means begins?

The question is, I think, most comprehensively answered by visualizing a few of its advantages:

What would it mean to cut off 420 miles in distance from our northern

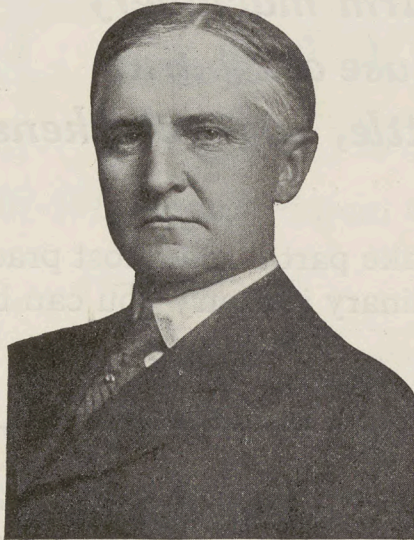
petition with its 400 miles rail haul, trans-shipment and terminal charges?

What would it mean to have our great shipyards continue in profitable operation indefinitely instead of facing long "shut downs," if not dismantling?

What would it mean to witness mer-

chant ships flying the colors of all nations steam into our harbor and discharge their cargoes on northwestern docks?

What would it mean to the people of Europe now looking toward America as a "Land of Promise" if the hardy peoples of these countries could step off the docks and out upon our unoccupied land, which to some of us may seem hard to subdue, but to them would be a Garden of Eden?



Hon. Charles P. Craig of Duluth

lake ports to Liverpool, and at the same time avoid trans-shipment at Buffalo and again at New York?

If it saved 5 cents a bushel on the spring wheat of Minnesota and the two Dakotas (and it would), then it would mean \$17,500,000 annually to these states, on wheat alone.

What would it mean in lowering the cost of products at interior points by the lowering of the freight rate and increasing the price of outgoing products for the same reason?

What would it mean to have a rearrangement of railroad rate structures based on an ocean port?

What would it mean if the millions of tons of non-merchantable ores of the eastern Mesaba range, concentrated by a process now perfected, could be loaded at the docks in Duluth and landed on the far side of the Atlantic?

What would it mean to Minnesota as a milling center if export flour could be loaded in boats and landed in the ports of the world without breaking bulk?

What would it mean to the development of manufacturing in all lines of industry—but particularly those of iron and steel to reach world markets? Largely eliminating Pittsburgh com-

"Welcome Home" Flags ON CLOTH

Every store, office, factory, home and business house should express their welcome to returning soldiers and sailors. (Hang one in your window.)

SEND 30c in Stamps or Money Order. WE PAY POSTAGE

Size 12x16 inches. Red, white and Blue. Two eyelets for hanging.

SAVE MAGAZINE MONEY

You can get more magazines for the same money or the same magazines for less money by ordering your magazine subscriptions from us. Being a Subscription Specialist, we will show you how to save one-third or more of your magazine money. A card brings us to your service at once.

We are wholesale and retail dealers in Magazines and carry the largest stock in the Upper Peninsula. We take subscriptions to any magazine and newspaper published.

ESCANABA NEWS SERVICE

ESCANABA, Wholesale and Retail MICHIGAN

CUT-OVER GRAZING and FARMING LANDS

in Dickinson and Menominee Counties

O. C. LUMBER CO. NORWAY, MICH.

The Soo Hardware Company

Established 1886

Sault Ste. Marie., Mich.

TELEPHONE 486

The Largest Stock of Builders' Hardware in the Upper Peninsula of Michigan. We are in touch with all points.

We have access to the World's Greatest Markets. This

Means Service to YOU.

Advertising "Photoplaylets"

Films That Flash Your Advertising Story on the Movie Screen and Fix the Facts About Your Products Unforgetably in the Minds of the Public

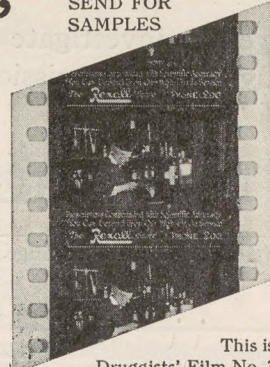
The most powerful form of advertising. No progressive advertiser can afford to overlook it. Motion pictures have grown in popularity with amazing rapidity because they can do one thing with 100% efficiency—THEY CARRY MESSAGES, CONVEY IDEAS. That's why they were declared essential in war time. PHOTOPLAYLETS are so effective because they combine expert advertising talent with photographically perfect film, display real actors amid real scenes, and do it simultaneously with the display of your name and any other desired advertising copy. Write for particulars—We have PHOTOPLAYLETS for nearly every line of retail business.

ROTHACKER FILM MANUFACTURING COMPANY

1339-51 DIVERSEY PARKWAY

CHICAGO, ILL.

SEND FOR SAMPLES



Cloverland Representative for "Photoplaylets"

KENNETH R. EDDY

This is Druggists' Film No. 3

Menominee, Mich.

This lumber company was the first to bring cattle to its cut-over lands, and carry on profitable and successful grazing in Cloverland.

We offer Cut-Over Lands

in Dickinson, Baraga, Menominee, Iron,
Gogebic Counties, Cloverland.

*We own 15,000 acres in the Upper Peninsula of Michigan, and
20,000 acres in Forest and Florence counties, Wisconsin.*

J. W. WELLS LUMBER COMPANY
MENOMINEE, MICHIGAN

*The greatest hardwood mill in the world, with an annual
output of 51, 449,100 feet of lumber.*

WANTED

An Experienced Sheep or Cattle Man



WE have about twenty thousand acres of cut-over hardwood land, well set in blue grass, clover and timothy, excellent grazing. There is grazing ready for several thousand sheep and at least one thousand head of cattle. From two to three thousand acres have been cut over for years, stumps well rotted, and this can be cleared at very little expense. Several hundred acres already in hay among the stumps.

The soil is of Cloverland's best hardwood soil, will grow all crops for wintering stock.

We have the buildings of an old saw mill, room to house 5,000 ewes, right near the railroad.

We want to go in partnership with a man who has the sheep and cattle. We want a practicable experienced man. We will help in every way to make his work successful. This has the makings of an ideal stock ranch.

Write us, giving complete information about your qualifications and ability.

LAKE INDEPENDENCE COMPANY
BIG BAY, MICHIGAN

JAY B. DEUTSCH, Secretary.

250,000 ACRES

unimproved
cutover lands for sale
in tracts to suit

LOCATED IN FOURTEEN COUN-
TIES IN CLOVERLAND—THE
UPPER PENINSULA OF MICHIGAN

Prices \$5 to \$15 per acre
Terms Reasonable

Write me for definite quotations, maps, etc.

J. M. LONGYEAR
MARQUETTE, MICH.

Marquette County Has Fine Sheep Record

(Continued from Page 4)

county has a future in the livestock industry. Not only has the county the area, soil and climate for sheep, it also can raise grain. The county agent has had access to the threshermen's reports made weekly by them to the secretary of state and he has many recorded yields of over forty bushels of barley per acre and some as high as 70 and one of 90. Oats run

as high as 82 bushels per acre and spring wheat up to 46 bushels per acre with many over thirty. Roots, such as rutabagas, carrots, sugar beets and turnips, grow wonderfully well and clover will grow abundantly on any of the clay or sandy till, in fact, grows wild on much of it. What more is wanted to make ideal live-stock conditions?

ONEIDA COUNTY LANDS

I own 8,000 acres of cut-over timber lands which I offer to prospective settlers at low prices and easy payments. Write for maps and prices.

C. P. CROSBY, Rhinelander, Wis.

Past Sixty Years

WANT TO RETIRE

FOR SALE—My Farm, where I have made enough to keep me and my family the rest of our days—240 acres, 120 acres in cultivation, fenced and cross fenced. Good eight-room house. Barn room for more than 75 head cattle, with sheds for more.

All kinds of farm machinery and tools that are in excellent shape, just as good as new.

This is one of the very best money making farms in the country—best clay soil, three miles from town.

If looking for a real good farm bargain, write for more complete information. Address:

A. J. F. Cloverland Magazine, Menominee, Mich.

CUT-OVER LANDS

*17,000 acres all adaptable
for Sheep or Cattle Grazing*

One choice section fenced and portions well seeded. A very desirable location for a small operator, or a breeding ranch. Two creeks furnish an abundance of pure, fresh water. Within half mile of railroad.

Larger tracts to suit purchaser.

WEIDMAN & SON COMPANY
TROUT CREEK, MICHIGAN

Chas. M. Schwartz,
President

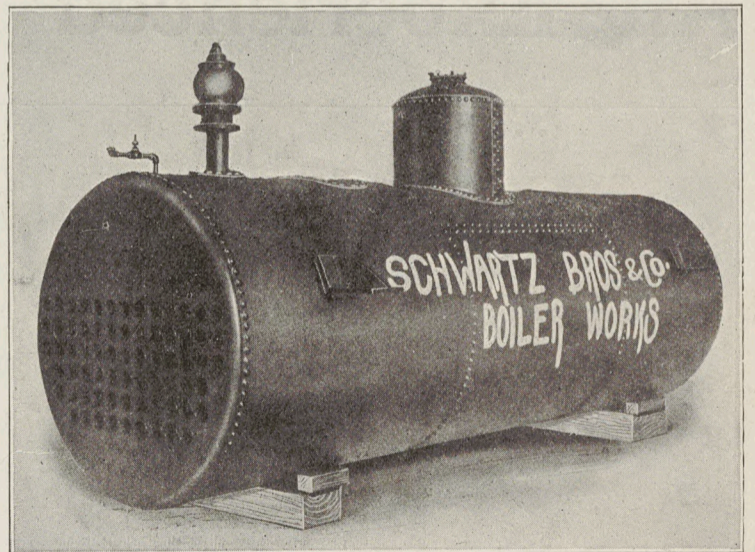
John H. Schwartz,
Vice-President

D. A. Hastings,
Secy. and Treas.

SCHWARTZ BROS. & CO. BOILER WORKS

CHEBOYGAN, MICHIGAN

Office and Plant Corner First and Huron Streets.
Bell 'Phone No. 40



Manufacturers of

Corrugated Culverts Fire Escapes and Highway Bridges
Architectural Steel and Iron Work for Jails and Prisons

Repair Work Promptly
Attended to Day
or Night

New Boilers for Land and Marine Use
Second-Hand Boilers Bought and Sold
Sheet Iron Tanks of Any Description
Spark Arresters and Flue Welding
Second-Hand Saw Mill Machinery

These Strong Cloverland Banks Are Ready and Willing to Give Every Possible Co-operation to New-comers. They Invite Correspondence

First National Bank of Calumet

Calumet, Michigan
Capital \$200,000.00

CALL IN AND SEE US

We are always pleased to serve you

Officers:

John D. Cuddihy, President
Edward Ulseth, Vice President
Edward F. Cuddihy, Cashier
Daniel C. Harrington, Asst. Cashier
Pierce Roberts, Asst. Cashier

The State Bank of Ewen

Ewen, Michigan

Officers:

L. Anderson, President
J. S. Weidman, Jr., Vice President
E. J. Humphrey, Vice President
A. M. Anderson, Cashier

Directors:

L. Anderson, Calderwood, Mich.
J. S. Weidman, Jr., Trout Creek
E. J. Humphrey, Ewen
J. N. Howlett, Bruce Crossing
J. F. Foglesong, Ewen
Nugent Dodds, Ewen
A. M. Anderson, Ewen

First National Bank of Menominee

Menominee, Michigan

Resources Over \$1,600,000.00

Oldest and largest Bank in Menominee County and under same management for 32 years.

Depository for United States and State of Michigan

Officers:

G. A. Blesch, President
John Henes, Vice President
C. W. Gram, Cashier

The Newberry State Bank

Newberry, Michigan

Capital, \$30,000.00
Surplus, \$6,000.00

A General Banking Business. Commercial and Savings Departments. 3% Interest paid on Savings Deposits.

Officers and Directors:

F. P. Bohn, President
W. G. Fretz, Vice President
L. H. Fead, Vice President
E. M. Chamberlain, Cashier
E. L. Fretz, J. C. Foster
Andrew Weston, Matt Surrell

First National Bank of Bessemer

Bessemer, Michigan

Capital, Surplus and Profits,
\$125,000.00

Oldest Bank in Gogebic County

First National Bank of Iron River

Iron River, Michigan

Capital, \$50,000.00
Surplus, \$20,000.00

We invite letters of inquiry regarding Iron County

Ellsworth S. Coe, President
Wm. J. Richards, Vice President
A. J. Pohland, Cashier

The Lumbermen's National Bank

Menominee, Michigan

One of the Oldest and Strongest Banks in Cloverland

Officers:

Warren S. Carpenter, President
Wm. Webb Harmon, Cashier

First National Bank of Sault Ste. Marie

Sault Ste. Marie, Michigan

Since 1886 this strong bank has been interested in the growth and development of Chippewa County. Correspondence invited.

Officers:

R. G. Ferguson, President
Otto Fowle, Vice President
Chase S. Osborn, Vice Pres.
E. H. Mead, Vice President
Fred S. Case, Vice Pres. and Cashier

Escanaba National Bank

Escanaba, Michigan

Assets over \$1,000,000.00

Bank with an institution whose directors and officers are actively interested in Cloverland.

First National Bank of Marquette

Marquette, Michigan

Over Two Million Dollars of Resources

Officers:

Louis G. Kaufman, President
Edward S. Bice, Vice President
Charles L. Brainerd, Cashier

Commercial Bank of Menominee

Menominee, Michigan

"The Bank of The People"

invites correspondence from prospective settlers. You can bank by mail with us.

First National Bank of St. Ignace

St. Ignace, Michigan

The oldest and largest Bank, and the only National Bank in Mackinac County

Your business inquiries will receive prompt and courteous attention

Officers:

O. W. Johnson, President
E. H. Hotchkiss, Vice President and Cashier



William G. Mather, President
G. Sherman Collins, Vice President and Cashier
John N. Korpela, Asst. Cashier

Marquette National Bank

Marquette, Michigan

Capital and Profits, \$160,000.00
United States Depository
We invite correspondence

Officers:

J. M. Longyear, President; D. W. Powell, Vice President; F. H. Begole, Vice President; F. J. Jennison, Cashier; H. R. Fox, Assistant Cashier; E. A. Brown, Second Assistant Cashier.

Directors:

John M. Longyear, J. G. Reynolds, Wm. G. Mather, Daniel W. Powell, A. T. Roberts, Fred H. Begole, Austin Farrell, Dan H. Ball, R. P. Bronson, Frank J. Jennison.

Houghton National Bank

Houghton, Michigan

United States Depository

Capital - - - - - \$200,000
Surplus - - - - - \$200,000
Undivided Earnings \$250,000

Officers:

J. H. Rice, President
W. D. Calverley, Vice President
A. N. Baudin, Vice President
C. H. Frimodig, Cashier
R. T. Bennallack, Asst. Cashier
Edward Rompf, Asst. Cashier
F. C. Stoyale, Asst. Cashier

The Marquette County Savings Bank



Savings Bank Building

The Quality Paper



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